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Digests of nine research studies designed to answer enquiries raised by the Texas Legislature about teacher education and certification. The bases for this report were rough drafts of the original reports and interviews with their investigators. The following are among the topics covered:

- Beliefs about Public Education and Opinions about Teacher Education.
- History of Certification in Texas.
- Census Data Related to Public School Enrollment in Texas.
- Supply and Demand of Teachers in Texas 1961–62.
- College Students Prepared to Teach 1961–62.
- Undergraduate Teacher Education Programs in Texas Colleges 1961–62.
- Undergraduate Courses in Education in Texas Colleges 1961–62.
- Instructional Staff of Teacher Education Programs in Texas Colleges 1961–62.
- Texas Teachers and Their Work 1961–62.

Each study will be published later as a separate report.

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A DIGEST OF
THE RESEARCH PROJECTS

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SANDY A. WALL

Editor

1962

TEXAS CHRISTIAN UNIVERSITY
EDUCATIONAL RESEARCH CENTER
FORT WORTH, TEXAS

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ON TEACHING, TEACHERS, AND TEACHER EDUCATION

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TEXAS CHRISTIAN UNIVERSITY
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This study was made possible by a grant from the Texas Education Agency, which also made available its publications and records, and furnished consultant services, particularly those of Milo Kearney, Director of Teacher Education, Fred Stoker, Assistant Director, and Earl Cantrell, Director of Research. Data-retrieval for the study on the work of Texas teachers was made at the Agency, and was co-ordinated by J. Warren Hitt, Deputy Commissioner of Education.

Data-retrieval for the other questionnaire studies was made at the Texas Christian University Computer Center. Its staff wrote the computer programs and assisted in the compilation of data.

The research was done on the campus of Texas Christian University which made its general resources available to the research project.

The Education Scale, used in the studies on beliefs and on college students, was developed by Fred N. Kerlinger of New York University, and was used with his permission. The check lists on curriculum areas and educational tasks, used in the same two studies, were adapted from a scale developed by Richard F. Carter of Stanford University, who gave permission for its use in this project.

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This digest was typed for reproduction by Mrs. Evalyn Shackleford and Mrs. Mary C. Cravens.

In particular, the research staff is grateful to the many people who completed the questionnaires upon which most of this report is founded.

PREFACE

There are two purposes of this report: (1) to summarize the individual studies that comprise the Texas Studies on Teaching, Teachers, and Teacher Education, and (2) to answer some questions about teacher education and certification. These questions either were asked directly by the Texas Legislature in its last session, or were implied by the direct questions.

Senate Resolution 451, introduced by Senator Hudson of the 57th Legislature, directed the State Board of Examiners for Teacher Education to "report back to the Senate at the beginning of the next legislative session concerning efforts made to increase the quality of education in our various state teachers colleges and colleges of education, and also we specifically ask that such report give us details concerning the number of methodology and 'how to teach' courses in proportion to the major courses and subjects taught in each of the state-supported institutions."

House Resolution 717, introduced by Representative Snelson, requested The Texas Legislative Council "to make a complete study of teacher certification in Texas, including a review of certification procedures, certification requirements and how they are determined, certification methods, and a comparison of Texas requirements and procedures in teacher certification with those of other states. . . ."

The State Board of Examiners, as an advisory group to the Commissioner of Education, requested the Commissioner for permission (1) to prepare the specific report directed by the Senate; (2) to conduct a study to parallel the one requested of the Legislative Council by the House; and (3) to survey some of the more important factors and situations that influence teacher education in Texas.

The State Board of Examiners believed that this survey of influencing factors was essential since both teacher education in general, and teacher certification in particular, are contingent upon multiple factors within public education, higher education, and the culture itself. Some of these factors which would be examined in this study were (1) beliefs about public education; (2) the historical background of Texas certification; (3) census data relating to public schools; (4) supply and demand of teachers; (5) characteristics of students preparing to teach; (6) characteristics of teacher education institutions, including teacher education programs, professional education staff, and education courses; and (7) characteristics of the teachers in Texas public schools. This research project was assigned to the Educational Research Center at Texas Christian University.

To gather material for this report, eleven survey studies were designed by the Project Director, Herbert F. LaGrone. Each study was designed to be independent, and will be published later as a separate report. The studies were combined under the broad title, _The Texas Studies on Teaching, Teachers, and Teacher Education_. The eleven studies were assigned a number. They were as follows:

Study 1. Beliefs about Public Education

Study 2. History of Certification in Texas

Study 3. Census Data Relating to Public School Enrollment in Texas

Study 4. Personal Characteristics of the Texas Teachers

Study 5. Students in Texas Colleges Preparing to Teach 1961-62

Study 6. A Detailed Study of the Pre-service Preparation Programs for 1961-62 Students in Texas

Study 7. An Analysis of Education Courses

Study 8. Professional Education Staff

Study 9. The Work of the Elementary School

Study 10. The Work of the Secondary School

Study 11. Preparation, Experience, and Assignment of Teachers in Texas Public Schools 1961-62

Study 4 was eliminated from the list; it is hoped that this study can be made in the near future. The study on supply and demand was substituted for it. Studies 9, 10, and 11 were combined into a single study since the same questionnaire was used for them. To Study 1 was added a study on opinions about teacher education. The revised list of studies, with some change in title, is as follows:

1. Beliefs about Public Education and Opinions about Teacher Education
2. History of Certification in Texas
3. Census Data Related to Public School Enrollment in Texas
4. Supply and Demand of Teachers in Texas
5. Characteristics of College Students Preparing to Teach 1961-62
6. Undergraduate Teacher Education Programs in Texas Colleges 1961-62
7. The Instructional Staff of Teacher Education Programs in Texas Colleges 1961-62
8. Undergraduate Courses in Education in Texas Colleges 1961-62
9. Texas Teachers and Their Work 1961-62

Material that was available in libraries was used in Studies 2, 3, 4, and part of 1; questionnaires were used in the other studies. These questionnaires appear in the appendix of this volume. They were reproduced from the original copies, and carry the numbers and titles they were given in the original design. The digest of each study refers to the questionnaire on which the report was based.

As was stated earlier, each study will be published later as a separate report. At the time this digest was prepared, the investigators had completed the major portion of the studies, but had not written in final form the comprehensive reports. These should be ready for publication later in the year. So that the essential findings of these studies could be made available as early as possible, the editor was asked to prepare this digest. The bases for this digest have been the rough drafts of the original reports and interviews with their investigators. In the case of some of the lengthy questionnaire studies, data had not been obtained on all of the items appearing on the questionnaire. If the reader finds items in the questionnaires not reported in the digests it is for one of two reasons: the data were not available, or the results were not thought to be important enough to include in a digest. In either case the material will be published in the complete reports later. The lack of general availability of these complete reports caused the research staff to decide that these digests should be more detailed than is usual for such writing.

In addition to the digests themselves there is a conclusion, containing a list of questions and answers about teacher education. These questions either were asked directly by the Legislature, or were implied by those direct questions.

During the process of this research, the staff has been asked frequently, "What have you found out?" Doubtless many readers of this report will ask the same question. There is, of course, no short answer. The research design itself had many facets, and the investigations contain many details. There is also the problem that no comparable earlier study of this scope has been made.

The principal worth of this research probably lies in the fact that it is a descriptive study of teacher education in Texas at a particular time, and as such can serve as a base line from which progress may be measured in future studies.

For more specific findings the reader is asked to read this report.

Sandy Wall, editor
Texas Christian University

STUDY 1. BELIEFS ABOUT EDUCATION AND OPINIONS ABOUT TEACHER EDUCATION

Study Director: Sandy A. Wall

This study had two purposes: (1) to find out what groups closely associated with schools believe about public education, and (2) to discover what opinions about teacher education were prevalent in the writings of academic organizations. The first part of the study utilized a questionnaire (See Appendix A), which was sent to a selected list of public schools and teacher education institutions; and from these centers the questionnaires were distributed according to a designated plan to (1) school board members, (2) school teachers, (3) school administrators, and (4) college teachers and officials. A fifth group, citizens, had returns too small to justify analysis in this digest. The results for this group are in the report for this study. The second part of the study was developed from an analysis of published statements of organizations interested in teacher education. The study was made by Bowen[1], a graduate student at Texas Christian University, and was supervised by the study director. The report is on file in the Curriculum Library at T. C. U.

A. BELIEFS ABOUT PUBLIC EDUCATION

The sections of the questionnaire reported in this digest are (1) an attitude inventory whose answers could be classified as idealism, realism, or pragmatism; (2) a scale developed by Fred N. Kerlinger at New York University which measures progressivism and traditionalism; (3) an inventory which measures opinions about the importance and performance of some selected educational tasks of the schools. These last two inventories were adapted from a scale devised by Richard F. Carter of Stanford University.

---

[1] Don L. Bowen, "An Analysis of Some Organizational Views of Teacher Education." Fort Worth: Curriculum Library of Texas Christian University, 1962. Typescript.

The returns were not so large as desired, and any interpretation of the data should recognize the limited returns. Out of approximately 3,400 questionnaires, 1015 usable returns were obtained; this was a 30 per cent return. The returns came from 110 of the public schools to which they were sent, and from thirteen junior colleges and thirty-four senior colleges.

Philosophies of education

As used in this study, idealism meant an emphasis on the great cultural traditions of western civilization, and the development of abstract thought. Realism meant an emphasis on scientific facts and principles, and the development of the scientific method. Pragmatism meant an emphasis on the social nature of man, and the development of problem-solving techniques. In the inventory, these philosophies are described in terms of theoretical contrasts; actually, they have many areas of agreement. These philosophies cannot be classified as "good" or "bad," nor do they usually occur in an individual in a "pure" form. Each philosophy is harmonious in its own way with such fundamental educational principles as the well-being of a democratic society, individual rights, the development of an integrated personality, the importance of a planned program of education in a democracy, and a system of universal education. The philosophy inventory indicated a difference among several groups in their general attitude toward education. There was general rejection of idealism by nearly all groups, although 31 per cent of the college teachers accepted it. It was rejected by 46 per cent of the board members, 68 per cent of them making "high" realism scores. It was rejected by 59 per cent of the college group and by 45 per cent of the school administrators and by 39 per cent of the teacher group. It was unacceptable to 64 per cent of the board members. Based on the comparison of the mean of each group with the mean for the total group, the philosophy of each group is as follows:

Board members -- strong realism

School teachers -- mild pragmatism

School administrators -- mild pragmatism

College group -- mild pragmatism

The board members apparently are unified in their philosophy. The other groups have more differentiation of philosophical positions within their ranks, and lack as a group a single philosophic position. This information is summarized in Table 1.1.

TABLE 1.1. PHILOSOPHIES OF EDUCATION

GROUP	IDEALISM (Mean=2.28)			REALISM (Mean=2.60)			PRAGMATISM (Mean=4.91)		
	Per cent High	Per cent Low	Mean	Per cent High	Per cent Low	Mean	Per cent High	Per cent Low	Mean
School Board	19	43	2.11	68	10	4.77	7	64	2.98
Teachers	19	46	2.03	28	39	2.34	39	25	5.46
Administrators	14	45	2.02	19	49	2.13	45	21	5.70
College	31	38	2.77	18	59	1.69	39	35	5.16

High scores are those greater than Mean+.5 standard deviation

Low scores are those less than Mean-.5 standard deviation

Progressivism and traditionalism

The terms "progressive" and "traditional" in education have assumed meanings which are not necessarily synonomous with the philosophic positions described in the previous section; however, in most instances traditionalism tends to combine idealism and realism, and progressivism tends to emphasize pragmatism, with occasional idealism items. Kerlinger says that traditionalism implies a restrictive, conventional attitude, emphasizing the "teaching-subject-matter-curriculum." Progressivism, on the other hand, is a permissive, individualistic attitude, emphasizing the interpersonal aspects of the curriculum. The scale yields three scores: an "A" score, indicating Progressivism, a "B" score, indicating Traditionalism, and an "A-B" (difference) score, indicating consistency of belief.

The college group is the most progressive, and the school board members the least. The ranking of the groups, in terms of progressivism scores, from high to low, is as follows:

1. College
2. Administrators
3. Teachers
4. School board

Only the school board has a mean score lower than the mean for the total group.

The school board members are the most traditional, and the college group is the least. The rankings of the groups, from high to low, is as follows:

1. School board
2. Teachers
3. Administrators
4. College

Only the college group has a mean score lower than the mean for the total group. This information is summarized in Table 1.2.

TABLE 1.2. PROGRESSIVISM AND TRADITIONALISM

GROUP	PROGRESSIVISM (Mean=4.83)			TRADITIONALISM (Mean=4.82)		
	% High	% Low	Mean	% High	% Low	Mean
School Board	12	56	4.31	52	8	5.29
Teachers	28	25	4.85	34	28	4.89
Administrators	30	24	4.91	36	35	4.83
College	45	23	5.1	20	51	4.41

High scores are those greater than Mean+.5 standard deviation.

Low scores are those less than Mean-.5 standard deviation.

Kerlinger suggests that the "A-B" (difference) scores may be used to indicate consistency of position. School board members tended to be most consistently traditional, and the college group tended to be the most consistently progressive.

Curriculum areas

A list of ten major curriculum areas was prepared. The list included (1) mathematics, (2) language arts, (3) social sciences, (4) science, (5) driver education, (6) health and physical education, (7) trade training, (8) practical arts, such as homemaking and commercial arts, (9) fine arts, and (10) foreign language. Each item could be rated in terms of importance from 4 (very important) to 1 (not at all important); and, in the same way, in terms of performance, from very well performed to not performed at all. No restrictions were placed on the respondent; he could rate all items of equal value if he wished. A rank of importance and performance of each curriculum area was obtained, both for each of the groups and for the total sample. In terms of the sample, the various groups are in high agreement on the importance of curriculum areas. Mathematics, language arts, social science, and science all rank in the first four places for all groups, although there are minor differences in the rankings. Trade training, practical arts, fine arts, and driver education occupy the bottom four positions, although there are minor differences in the order. This information is summarized in Table 1.3.

The groups generally agree that the level of performance is not so high as the level of importance. There is less agreement on the rank order. Mathematics, language arts, social science, and science generally occupy the top four positions, but school board members indicate that health and physical education is the fourth best performed area, thus outranking language arts, and the college group places driver education in third place, after mathematics and language arts, and practical arts in fourth. Practical arts, fine arts, trade training, and foreign language generally occupy the bottom four positions. Generally, the groups consider the important areas also to be those best performed. The college group, however, does not agree on the order of importance and performance. This information is summarized in Table 1.4.

Educational tasks

Some frequently cited goals of education were included in the questionnaire as tasks the school should perform. The list included some items over which there is known dispute. The same type of analysis used for curriculum areas was applied. The groups agreed that (1) citizenship, (2) independent study, and (3) working with others were the top three tasks

TABLE 1.3. CURRICULUM AREAS: IMPORTANCE

AREA	SCHOOL BOARD		TEACHERS		ADMINISTRATORS		COLLEGE		TOTAL	
	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
Mathematics	3.95	1	3.92	2	3.95	2	3.89	2	3.92	2
Language	3.90	2	3.95	1	3.98	1	3.97	1	3.95	1
Social Science	3.55	4	3.73	3	3.75	3	3.78	3	3.70	3
Science	3.59	3	3.61	4	3.65	4	3.56	4	3.58	4
Driver Education	2.59	10	2.93	10	2.71	10	2.55	9	2.73	10
Health & P. E.	3.34	5	3.57	5	3.47	5	2.45	10	3.43	5
Trade Training	3.11	6	3.25	7	3.10	8	2.81	8	3.08	7
Practical Art	2.96	8	3.29	6	3.11	6	2.89	7	3.07	8
Fine Arts	2.71	9	3.08	9	2.96	9	3.17	6	3.01	9
Foreign Language	3.10	7	3.22	8	3.10	7	3.44	5	3.24	6

TABLE 1.4. CURRICULUM AREAS: PERFORMANCE

AREA	SCHOOL BOARD		TEACHERS		ADMINISTRATORS		COLLEGE		TOTAL	
	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
Mathematics	3.42	2	3.42	1	3.34	1	2.83	1	3.26	1
Language	3.16	5	3.27	2	3.30	2	2.79	2	3.14	2
Social Science	3.24	3	3.21	3	3.14	3	2.65	7	3.05	3
Science	3.53	1	3.15	4	3.04	4	2.72	5	3.01	4
Driver Education	2.99	7	2.87	7	2.96	5	2.96	3	2.94	5
Health & P. E.	3.19	4	3.04	5	2.79	7	2.67	6	2.93	6
Trade Training	2.55	9	2.34	10	2.28	10	2.55	9	2.64	9
Practical Art	3.01	6	2.95	6	2.86	6	2.72	4	2.89	7
Fine Arts	2.86	8	2.71	8	2.68	8	2.62	8	2.71	8
Foreign Language	2.52	10	2.53	9	2.52	9	2.36	10	2.48	10

of education. Of least importance were (1) guidance, (2) personal and social problems, and (3) internationalism. There is some variance in the other items. College preparation, for example, ranks from 4th (school board) to 9th (administrators). This information is summarized in Table 1.5.

TABLE 1.5. EDUCATIONAL TASKS: IMPORTANCE

AREA	SCHOOL BOARD		TEACHERS		ADMINISTRATORS		COLLEGE		TOTAL	
	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
Citizenship	3.91	1	3.98	1	3.97	1	3.92	1	3.94	1
Emotion	3.59	6	3.86	4	3.81	5	3.68	5	3.74	4
Guidance	2.85	12	3.11	12	3.05	12	3.10	12	3.04	12
Occupation	3.41	7	3.59	7	3.54	8	3.39	8	3.49	7
Internationalism	3.08	10	3.37	11	3.31	11	3.45	6	3.36	10
Independent Study	3.84	2	3.97	2	3.95	3	3.92	2	3.92	2
Work with Others	3.79	3	3.93	3	3.88	4	3.73	3	3.83	3
Family	3.40	8	3.58	8	3.64	6	3.32	10	3.47	8
Texas	3.36	9	3.58	9	3.57	7	3.13	11	3.40	9
Social Problems	3.06	11	3.45	10	3.44	10	3.38	9	3.35	11
Creativeness	3.60	5	3.73	5	3.68	2	3.71	4	3.69	5
College Prep.	3.74	4	3.64	6	3.49	9	3.45	7	3.59	6

As was true with the curriculum areas, the groups generally agree that the level of performance is not so high as the level of importance. The top three items in performance were citizenship, local Texas history, and college preparation. The three low items were creativeness, internationalism, and guidance. This information is summarized in Table 1.6.

Generally the groups consider the important tasks also to be those best performed. The college group showed a small negative correlation between the two measures. Generally there is higher agreement between importance and performance of the tasks than of the curriculum areas.

TABLE 1.6. EDUCATIONAL TASKS: PERFORMANCE

AREA	SCHOOL BOARD		TEACHERS		ADMINISTRATORS		COLLEGE		TOTAL	
	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
Citizenship	3.30	1	3.23	1	3.22	1	2.75	4	3.11	1
Emotion	2.96	5	2.93	5	2.83	5	2.40	8	2.78	5
Guidance	2.56	12	2.46	12	2.34	12	2.17	12	2.38	12
Occupations	2.83	10	2.87	7	2.77	7	2.52	5	2.75	6
Internationalism	2.68	11	2.73	11	2.64	11	2.33	9	2.59	11
Independent Study	3.03	4	2.86	8	2.77	6	2.30	10	2.73	8.5
Work with Others	3.22	3	3.19	3	3.02	3	2.75	3	3.05	4
Family	2.94	8	2.83	9	2.75	8	2.41	7	2.73	8.5
Texas	2.94	7	3.27	1	2.99	4	2.92	1	3.11	2
Social Problems	2.89	9	2.89	6	2.68	9	2.47	6	2.75	7
Creativeness	2.95	6	2.79	10	2.64	10	2.28	11	2.66	10
College Prep	3.30	2	3.12	4	3.14	2	2.79	2	3.07	3

The fact that the returns were relatively small causes doubt about the stability of the conclusions. Within the limitations of the sample, however, it seems that the groups differ in their basic theoretical approach to education, but agree on the more functional aspects of tasks and curriculum. One of the basic assumptions underlying the standards was the right to disagree on vital issues in education, and the ability to harmonize differences in plans of action. As long as such differences in theory exist, flexible teacher education programs are needed which can educate teachers who have, and understand, varying points of view, and who recognize that out of such diversity there can still be harmony in the practical aspects of immediate goals and curriculum areas.

B. OPINIONS ABOUT TEACHER EDUCATION

Along with criticisms of public education in general have come criticisms about teacher education, particularly the place of professional courses in education in the preparation of teachers.

No one has been more aware of the need for improvement of the teaching force than the teachers themselves. As early as 1893 the Texas State Teachers Association supported legislation to improve the requirements for teacher certification. Some changes in certification requirements were the direct result of the efforts of colleges and universities of the state

There are four basic attitudes toward teacher education. The first states that no specific preparation is necessary for the teacher. This point of view is held by those people and organizations that speak disparagingly of any specialization of any kind in education. Particularly repugnant to them are professional schools offering programs within the baccalaureate structure. True education for them, whether for teaching or anything else, is academic, or basic education. This position is supported by the Council for Basic Education, which has as its goal the strengthening of the basic subjects taught in American schools.

The second point of view allows academic specialization in the liberal arts, but does not see a place for professional preparation within the baccalaureate program, moving professional work beyond the four-year college. This point of view has been influential in a number of professions. The Fund for the Advancement of Education of the Ford Foundation has given substantial support to the post-graduate or graduate plan for teacher education. A number of states require five years for permanent certification, and many local school systems give preference in employment to the fifth-year group. This point of view might become even more acceptable to more people if there were not a general shortage of teachers.

The third point of view encourages extensive specialization in a subject field within the baccalaureate program. There is token recognition of general studies; nearly all of the work is in one area of study, although study in closely related fields is permitted. Groups supporting this point of view see teacher education as the development of a subject matter specialist, and usually include education courses within the special subject field. Many of the organizations of academic subject fields support this view, or some variation of it, wanting a higher level of specialization than is now required or permitted in most four-year programs. Many of the four-year programs in music, art, agriculture, business, home economics, and the sciences have reflected this point of view. Many organizations, such as the National Council of Teachers of English, and the various organizations of teachers of science, describe teacher education programs which prepare a teacher in a single subject. The position would be more acceptable were it not for the fact that public school teachers generally teach more than one subject. Only the very largest high schools, for example, can assign a teacher to teach full-time in biology, and most elementary schools are not departmentalized on a subject-matter basis.

The fourth point of view attempts to provide a balance between general studies, academic specialization, and professional education. This plan is the one reflected by current certification requirements in Texas. A broad background is provided in the sixty-semester hour requirement of academic foundations; specialization is provided in the two teaching fields of twenty-four hours each (or an alternate of one broad field of forty-eight hours); and professional education is provided in eighteen hours of education, six of which are student teaching. Nearly all of the states have certificate programs reflecting this point of view, and it is endorsed by such organizations as the Commission on Teacher Education and Professional Standards, and by the National Council for Accreditation in Teacher Education. The standard certificate program is possible within the four-year college program; it permits specialization in more than one field, enabling the teacher to teach more than one subject, and it recognizes professional education as a legitimate field of study which has a place in the training of teachers.

STUDY 2: TEACHER CERTIFICATION IN TEXAS

Study Director: Herbert F. LaGrone

This study, written by Dr. Herbert F. LaGrone, Texas Christian University, differed from most of the other studies summarized in this report in that it did not use a questionnaire as a data-gathering device. It was basically a survey-of-literature study, reporting on (1) the historical background for teacher certification in Texas, (2) the Standards for Teacher Education together with their development and implementation by the State Board of Examiners and the State Board of Education, and (3) the comparison of Texas requirements with those of other states.

The historical study utilized the thesis of Burton Mason, which was written at Southern Methodist University, in 1937, and, for material since this date, publications of, and documents from, the Texas Education Agency. The comparison of certificate requirements utilized a research paper written by Theodore Hofsiss at Texas Christian University in 1962. The section on the Standards for Teacher Education was prepared from original data, such as correspondence in the files of the Agency; interviews with individuals who were leaders of the Standards movement; recorded addresses, especially one by Dr. Benjamin F. Pittenger, Emeritus Dean of the College of Education, University of Texas, made in 1957, and one by Dr. J. W. Edgar, Commissioner of Education, made in 1952; publications of the Agency; and the minutes of the State Board of Examiners, especially a summary written by Dr. Mary Elizabeth Evans, of North Texas State University.

HISTORY OF CERTIFICATION

The new requirements of certification of teachers in Texas, which became effective in 1955, represented not so much a radical departure from the past as a codification of basic principles that had their roots in the history of Texas.

The earliest efforts at certification were directed toward the attainment of basic literacy of teachers. In 1803, Salcedo, General Commandant of the Interior Province, ordered schools established which would be taught by some settler "who knows how to read and write." The instructional program was to be the four r's -- the two just mentioned, and arithmetic and religion. In 1811, another edict called for the local authority to look for "efficient teachers," and if a fully qualified person was not available then the best qualified person could be used. Local districts in 1817 and 1818 registered dissatisfaction with the teachers who had been selected on this "emergency" basis. Settlers, of course, occasionally organized their own schools apart from governmental edict, but there were persistent complaints that adequate teachers were not available. One of the charges of the Texas settlers against the Mexican government related to the adequacy of schools, indicating the feeling that education was a governmental matter.

The Mexican government had made some efforts to provide education. In 1829 the Congress of Coahuila and Texas added moral qualifications to the literacy requirement, and designated the local authority as the responsible officer. This officer could employ the teacher for a period of three years. To the basic four r's was added "all of Ackermann's catechism of arts and sciences." Four years later the Mexican government announced a plan of competitive examinations for teachers seeking positions.

This plan was not developed; however, it became a basic pattern for certification in the Republic.

During the first four years of the Republic little time was given to school affairs by the central government. In a letter to President Mirabeau B. Lamar, A. J. Yates wrote in 1839 a suggestion for certifying teachers based on completion in an approved academy of a "course of instruction to qualify themselves as Teachers of Common Schools. . . ." Part of this suggestion became law in 1840, when the Fourth Congress provided for school inspectors to examine all persons who wished to teach in common schools or academies. The inspectors were to satisfy themselves as to the moral and literary qualifications of the candidate, and on this basis issue a certificate. Nothing was said in the law about "completion of a course of instruction. . ."; however, two other new concepts were included in the 1840 law: (1) no one could teach without a certificate, and (2) academy teachers were to be graduates of some college and hold a certificate to teach in Texas.

In 1854 a school law was passed providing for the election of local school trustees and authorizing them to employ teachers of suitable moral character and qualifications. This local certification resulted in varying requirements from community to community. Three years later county boards of examiners were established. These three-member boards, appointed by the county judge, were responsible for the certification of all teachers in the county. While no formal educational requirements were specified, the certificate did show the subjects the person was qualified to teach, thus establishing the concept of subject endorsements. Certificates were valid for one year.

No additional developments concerning certification were passed until after the Civil War. A law enacted in 1866 provided for county boards of examiners to be appointed by the "police court" -- the justices of peace presided over by the county judge. The law re-established the principles that all teachers must hold a certificate, that they teach the subjects for which they held endorsements, and that the county board examine all persons desiring to teach in the county.

Three years later there was a movement toward centralization of authority. The county boards were replaced by district boards, composed of two state officials (the newly created office of State Superintendent and the Comptroller), and two appointed members from the Congressional district. A decentralization trend was evinced by the addition, in 1870, of city certificates by a city board of examiners. A year later, however, certification was centralized in the office of the State Superintendent of Schools. The Superintendent, the Governor, and the Attorney General were designated the State Board of Education, and given broad authority for school policy. Basic to certification was a rule stating that "no teacher shall be permitted to teach in any public school in this State without a teacher's certificate issued by the Superintendent." A state board of examiners was created, and the superintendent could summon any teacher to Austin for an examination. In practice, the authority of the county boards was transferred to an appointed district supervisor who could examine and issue certificates in the name of the state superintendent. Classes of certificates were established; and first, second, and third-class certificates determined the kind of school a teacher could teach in, and, since salary was based on the class of certificate, how much money he would make. The office of principal, which had been cursorily recognized in the law of 1868, was established, and extra pay was given to the teacher acting in this administrative capacity.

The full impact of the law of 1871 was never felt, because, in 1873, a new law limited the central authority, and returned certification to the county boards of examiners. While the subjects to be covered in the examinations were stipulated, there was only one class of certificates, apparently for the common school alone, and provisions were made for certification of persons who could not pass the examination. However, a new principle was incorporated -- exemption from examination on the basis of college preparation. If a teacher had received instruction in a degree-granting institution of the state he was exempt from the examinations.

In 1876 authority for certification was placed with the county judge, and his board of examiners were required to be three well-educated members of the county. Certificates were still issued for one year, but reissuance without additional examination became possible. The moral qualification, which had appeared early in the history of certification, gained additional importance since immorality could be a cause for cancellation of a certificate. The law of 1879 brought about several changes. A permanent certificate was established, and certificates again became classified as first-, second-, and third-grade. The examination for the first-grade certificate covered several high school subjects and the first specific requirements in pedagogy -- school discipline and methods of teaching. The Sam Houston Normal Institute had been established, and with it came the first concept of teacher education as a function of higher education.

The law of 1893 gave further recognition to the importance of teacher education in higher education. Additional normal schools and the University of Texas were added to the Sam Houston Normal to comprise a list of approved institutions, and a diploma from one of the schools entitled a student to a certificate without a board examination. The law also required the county board of examiners to be composed of three teachers in the county holding first-grade or higher ranking certificates. The State Board of Examiners was also established in 1893; its members, appointed by the State Superintendent, were to be competent teachers in the state. Its functions were to review the examinations graded by the county boards, and to recommend applicants to the superintendent for a state certificate.

Summer normal institutes also were established in 1893. Two important principles of certification were related to their work. Their curriculum was approved by the State Superintendent, and an institute board was established to recommend students for certification. Institutions other than normal schools were recognized as teacher education institutions in 1903. "Institutions of the first class" had special privileges in some certification matters, and the State Board of Examiners had the function of recommending to the State Superintendent institutions of the first class. Increase emphasis on college preparation was given in 1909, when the first-grade state certificate, valid for two years, was based on one full year of college work -- five courses, one of which was pedagogy. By 1920 state colleges and normals ceased to issue certificates, and submitted credential summaries to the State Department of Education. With the exception of city certificates, all certificates have been issued by the state since 1920. One of the most diffusing laws on teacher certification was enacted in 1921. The names of the certificates were changed; provisions were made for temporary certificates of varying length of validity, and special subject certification was added. Unique to these special certificates was a special methods course required by law. This law remained relatively unchanged until 1955. There were about forty authorized certificates, some of them requiring little college work. A consistent provision of the law was that one-fifth of the college work was in education.

Certification, because of the ease with which teachers could be qualified, ceased to be a primary means of up-grading the schools. This responsibility became the province of accreditation. A teacher had to have some certificate to teach, but in order for a teacher to teach in an accredited school there were additional requirements. Special regulations, for example, were required of administrators of accredited schools.

The Foundation School Program Act of 1949 was not intended to be a teacher certification law. However, some of the positions authorized under the Act had no prior statutory basis, and the authority for establishing the qualifications was given to the State Board of Education.

After the enactment of the Foundation Act of 1949, there were no major changes in the certification structure until 1955. The Teacher Certification Law enacted in 1955 sought to raise professional standards, and revised the certification structure. It provided for two major classifications of certificates -- provisional and professional. The authority to issue emergency permits was retained to permit local districts to work out unusual teacher shortage problems. Considerable latitude was permitted in converting old certificates to new ones.

The requirements for the new certificates were described in Bulletin 573 of the Texas Education Agency, called "Teacher Certification in Texas." The provisional certificate was based on a bachelor's degree program, the professional on thirty hours of graduate work. These certificates had (1) legal requirements, such as a study of Texas and U. S. Constitutions, and (2) educational requirements, divided into academic foundations, teaching fields, and professional sequence.

These educational requirements had to be met in an institution approved for teacher education. The basis on which the institutions were approved were the Standards for Teacher Education in Texas, described in Bulletin 574 of the Texas Education Agency. The Standards, therefore, were directly related to certification.

THE DEVELOPMENT OF THE STANDARDS FOR TEACHER EDUCATION

As was stated in the section on the history of certification, accreditation assumed a dominant role in teacher education after 1921. The Texas Committee on Classified and Accredited High Schools was the legal body for the classification of schools. In classifying a school the Committee took into account not only such physical factors as finance, size, school plant, and curriculum, but also the work of the teachers, and, of special significance to teacher education, the preparation of these teachers.

The Committee established the requirement that superintendents and principals of accredited schools hold the bachelor's degree and an administrator's certificate. It also required accredited districts to assign high school teachers to teach in their fields of preparation. High school teachers were to hold the bachelor's degree, and teachers assigned to the elementary school were to have at least twelve semester hours in elementary education. The intent of this latter regulation, though never fully realized, was that the elementary teacher should have specific preparation in the teaching of such subjects as reading and arithmetic.

The effort of schools to become accredited resulted in a demand for teachers who met accreditation standards, and teacher education changed to meet this demand, rather than simply to meet the lower standards of certification. Many of the accreditation regulations concerning certificates became statutory with the enactment of the Foundation School Program Act of 1949. The administrator's certificate, along with other certificates for special service personnel, was recognized. The state salary schedule took into account not only the experience but also the level of professional training of the teachers. Basically, however, the Foundation School Program Act was primarily concerned with administrative and financial issues, although the Gilmer-Aiken Committee, whose work resulted in the act, had a sub-committee on teacher education.

In April 1950 the State Board of Education organized a study group known as the Cooperative Study of Teacher Education and Certification. In addition to this study group, an advisory group on teacher education was established in 1951 to deal with some immediate problems of teacher education. These two groups had the material from the Gilmer-Aiken Committee, and, in addition, organized conferences at the local, district, and state levels. One of the important state meetings was a one-week conference held in Austin in July, 1950. The participants represented all educational interests -- public schools, colleges, professional teachers associations, school board associations, and parent-teacher associations. The report of this conference, "Toward Professional Competence for Teachers," was made available to local school districts, interested teachers, and to citizens during the 1950-51 school year. Both individuals and groups were asked to make recommendations; about 5,000 reports came from local study groups, and these were compiled in a 250-page bulletin entitled "1951 Summer Work Conference in Teacher Education-Certification." This bulletin was the textbook for a state conference held in Dallas. Again the conference had a broadly-based representation of all segments interested in teacher education. At this conference it was proposed that a steering committee be appointed to continue the certification study. In August this steering committee appointed a proposals-writing committee, which produced "Tentative Proposals for Certification of Teachers." This report used the recommendations which had come from local study groups as well as those from the state conference.

This publication, together with a report of the 1951 teacher certification conference, was given wide distribution, and in November there appeared a bulletin "Proposed Standards for the Certification of Teachers." Beginning in January, 1952 and continuing through April, meetings were held in each of the eleven districts of the Texas State Teachers Association. These meetings were open to all individuals interested in teacher education, and the recommendations growing out of these meetings were formally reported to the steering committee in May in a 218-page document, "Report of District Hearing Panels." Two other publications were published and distributed in August and September.

From June to November the steering committee studied all of the recommendations that had grown out of the cooperative study begun in 1950, and after numerous drafts, published in November 1952 "Report of the Steering Committee: An Outline of the Major Recommendations for a Certification Program." This report was made at a state-wide meeting, and the written report was presented to the Commissioner of Education. This report was submitted to the Legislature in 1953, and from it developed the certification law of 1955.[1]

The State Board of Examiners, which had in 1893 been authorized by the Legislature to advise the State Superintendent concerning approval of colleges for teacher education, was enlarged in 1953, and became an official advisory board to the Commissioner of Education. It was legally designated as the State Board of Examiners for Teacher Education. The State Board of Education established a twenty-one member board, representative of the teaching profession. In addition to general advisory functions, the State Board of Examiners was to continue its function of recommending colleges and universities. This was to become a very important function since the new law was to base certification upon the completion of an approved program in an approved institution. One of the first actions of the newly constituted State Board of Examiners was to develop general regulations describing the criteria for this approval. These regulations were later designated as the _Standards for Teacher Education in Texas_.

The development of the standards extended over a period of two years, and they were reviewed by representatives of the colleges and universities of the state. After this review, the standards were re-written to incorporate the recommended changes, and were sent to the State Board of Education, who approved them.

The standards are based on a number of principles and assumptions about quality teacher education programs. The statement and description of some of these will illustrate their nature.

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[1] The steps in this two-year study of certification have been described in some detail to indicate the broad base of the committees making the study, the attention that was given to it by local groups, and the attention given to the recommendations by the steering committee. Every effort was made to let the people of Texas know what was going on, and to give them an opportunity to have a voice in the decisions.

1. *Quality teacher education programs recognize the democratic principles of the right to disagree on vital issues in education, and of the ability of people to harmonize differences in plans of action.*

Quality teacher education programs may be attained in a variety of ways. In a democracy there is a right to disagree on vital issues in education, and that such disagreement does not preclude the possibility of harmony in action. One of the basic fears of a single national system of education has been that of the imposition of a unitary educational system in which the states and the local districts do not have a voice. Teachers are needed for a variety of jobs in a variety of communities having a variety of opinions about the basic role of the schools. If all teacher education programs were alike and attempted to produce a stereotyped teacher, the uniform result would be a contradiction to the principle of individualism. In spite of differences in fundamental areas of belief and educational philosophy, it is possible to attain out of these differences an agreement on the basic tasks of education and the curriculum areas thought to be of most importance.

2. *Quality teacher education programs can best be developed within the framework of local college autonomy, and the diversity of local school district structure and employment practices.*

The concept of commonness of purpose in spite of diversity of conditions is a basic principle of the two premises of this assumption. The autonomy of the local college and the rights of the local school district may at first glance seem to be unrelated. Both, however, within their authority from the state, have certain rights. In the field of teacher education, the autonomous college has the right to develop programs which are in harmony with its purposes of higher education and which utilize its particular strengths. The autonomous local school district has the right to determine its school policies through its local board of education, and to employ teachers who, in addition to meeting the minimum state requirements for certification, possess qualities desired and needed by the local district. Placing responsibility for recommendation of students for certification with the individual college was a further instance of this recognition of local college autonomy.

3. *Quality teacher education programs will assure prospective employers and the public that the beginning teacher will have, within the structure of the baccalaureate degree,* (a) *general cultural background,* (b) *knowledge of two subject fields or one broad field,* and (c) *professional knowledge and skills.*

Prior to the development of the standards, academic quality controls were non-existent. The new law made teacher certification dependent on the completion of an approved program from an approved institution. It was evident from past experience that completion of a certain number of professional education courses alone did not guarantee that a beginning teacher had either a good general cultural background or thorough knowledge of one or more subject fields which he would be expected to teach in the high school. (Only the very large high schools could arrange a schedule whereby a teacher would teach in only one subject field.) The standards, therefore, authorized a program approach, and though the program was developed by the college itself, it had to contain certain elements: (1) academic foundations, which would assure exposure to a general cultural background; (2) subject-matter knowledge which would enable the teacher to teach in at least two subjects, and (3) professional knowledge and skills, which would enable the teacher not only to transmit subject-matter knowledge effectively but also to attain the many tasks of education which society has set for its schools. Although some local areas in some states have already set the graduate level as that to be attained by the teacher before certification, it was decided that the basic program in Texas should aim at beginning teacher competency within the baccalaureate program.

4. Quality teacher education programs recognize teaching as a synthesis of a cluster of specialties, requiring a variety of personality types with a variety of preparations.

The teaching profession is a cluster of specialties, and there is room in the profession for a variety of personality types. The teacher of elementary school children needs a different preparation from the secondary school teacher. Special teachers are needed for those special groups of children who cannot be taught in the regular school program. Within the commonness of the elements of the college program for teachers, therefore, there needs to be elasticity for the development of special skills.

5. Quality teacher education programs will attract quality students.

The lack of academic quality controls not only permitted many students of relatively low scholastic standing to be certified to teach, but also discouraged many superior students from entering the profession. It has been the experience of other professions that when preparation standards were raised there was an increase in the aptitude of applicants. It was, therefore, a basic belief inherent in the standards that the improvement of the teacher education program itself would in turn attract students of relatively high ability.

6. Quality teacher education programs will develop competent teachers for the jobs which are performed in Texas public schools.

The earlier certificate laws gave little attention to the relationship between the teaching assignment and the nature of preparation a person had. Guarantees that a teacher had preparation in the field in which he was teaching came primarily through accreditation procedure rather than through certification. The new certificate standards have designated as teaching fields those subjects which are taught in the public schools. The standards have required that teachers have special preparation at the school level, elementary or secondary, at which they teach. The two teaching fields and the broad fields requirements assured small schools of being able to employ teachers capable of teaching in more than one field. The standards for all-level teachers provided for a one-subject specialist who could teach at both elementary and secondary levels. The premise on which these varied approaches to certification was based was that the teaching jobs in Texas called for a variety of well-prepared teachers.

7. Quality teacher education programs necessitate teacher education faculties with high levels of scholarship and experience.

As was mentioned in the summary of the history of certification in Texas, the practice of certifying teachers on the basis of college work developed early in the twentieth century. The standards have attempted to encourage the development of quality programs, insisting that the senior colleges of Texas utilize their full campus resources for teacher education. It was felt that a well-prepared teacher could come only from those institutions which had a high level of facilities and a high level of scholarship and experience among the faculty.

8. Quality teacher education programs recognize the many forces and conditions affecting education in Texas.

Teacher education is highly dependent upon a number of forces and conditions. Probably no other single social agency is so greatly affected by the demands of the public, and by changes in social conditions. Such factors as the number of children of school age, the mobility of population, the age and occupation distribution of the population in general, local and national crises, the financial resources of a state to support education; in fact, all aspects of the culture have a direct relation to the schools, and therefore to the teacher education programs which prepare teachers for these schools.

Nature of the standards

The standards for teacher preparation in Texas were approved by the State Board of Education in July 1955, and even though they were amended by subsequent actions in 1957, 1959, 1960, and 1961, the approved-program approach to teacher certification was established and retained. Some elements of the standards needed to be restated, several areas of specialization needed to be added, and a redistribution of the subject content with the programs was found advisable.

There are seven standards concerned with the initial pre-service preparation of teachers relating to this report. Each statement within the standards is designed to provide flexibility in order to allow each institution a maximum of autonomy in program development.

Standard I deals with the basic characteristics of the college or university desiring to include teacher education within its purposes. The approved institution should demonstrate general quality by being accredited by a recognized accrediting body. Since teacher education is so closely related to the arts and sciences, an approved institution must have fully developed course offerings in these areas. Embodied within this standard is the concept that teacher education must be recognized as an important function of the college or university, and that provisions are made for the institutional-wide planning and coordination. Authorization for developing special programs,particularly for outstanding students, is provided.

Standard II describes some ideal characteristics of the faculty in an institution approved for teacher education. The total faculty, with primary concern for the professional development aspect of the program, not only should have had appropriate preparation and public school experience related to their assignment but also should demonstrate a continuing participation in research related to public education.

Standard III concerns the teaching load of the college or university faculty. No attempt is made to go beyond the requirements established by the recognized accrediting bodies in this standard, but the standard clarifies the relationship of certain unique aspects of teacher education to normal load practices. This is particularly directed toward the student-teaching requirement. The teaching load standard also attempts to stimulate research and writing by the faculty.

Standard IV deals with student personnel services. Under this standard it is necessary for each institution to have a strong recruitment program, and at the same time, to make provision for selective admission and screening. This standard attempts to increase both the number and quality of students planning to teach, to direct students to subject fields of greater demand, and to make sure that the prospective teachers are qualified socially and morally to work with children and youth.

Standard V relates to both the general and unique requirements of the library of an approved institution. Since the library is of major importance for scholarship it should have broad, general holdings, and, in addition, it is expected to include within the library structure a complete set of current state-adopted textbooks and teaching guides, courses of study, and other teaching materials that are necessary for a high level of competence for beginning teachers.

Standard VI sets forth the basic requirements for laboratory experiences for prospective beginning teachers in the public schools. These activities include observation and participation in connection with most of the courses in the professional sequence and especially in student-teaching. Direct contact with children and youth in school, in other social institutions, and in the community-at-large provides valuable interneship activities for the prospective teacher.

Standard VII provides the basic design for the course requirements of programs of teacher education. The standard assures a balance of the academic foundations, subject-area specialization, and professional development -- all essential for beginning competence for the prospective teacher. The pre-service plan is considered as basic to the initial preparation for a career in teaching, and it is assumed that once the teacher is employed he will continue to improve through experience and through self-initiated reading and study. The plan comprises four years of college work. Each institution can relate the program to its unique objectives and requirements.

The Approval Process

Since the new certification law made liberal provisions for students identified as "students-in-progress" or "individuals with prior eligibility," the initial problem in the approval process was to make sure that the colleges had programs for students who would be only beginning a teacher education program. The initial approval, therefore, was based on reports submitted by the colleges. These reports were prepared after a member of the State Department of Education had visited the campus and explained the elements that should be included in the programs.

After the reports had been read by members of the Agency staff, the institutions were asked to send representatives to Austin for a three-day meeting. Over 150 attended, and each report was read by one or more persons from another institution. On the basis of these several reviews, the State Board of Examiners made recommendations for approval to the Commissioner of Education. In nearly all cases, conditional approval was recommended. In all cases in which the written report seemed not to justify approval, revisions were worked out by representatives of the college.

Final approval was based on the findings of a visitation committee to the campus. From 1957 to 1961 all senior colleges and universities were visited, and eighteen have been revisited, by a committee whose membership represented higher education, public education, and the State Department of Education. The committees varied in size, depending on the size of the teacher education program at the institution. Over three hundred individuals have assisted in the visitation program.

A formal written report was prepared by the visiting committee, and it was submitted to the visited institution which clarified and verified it. The revised report was submitted to the Program Review Committee of the State Board of Examiners. The analysis by this committee was also submitted to the institutions for authentication. The visiting committee's report, the analysis by the review committee, and the college's reply were submitted to the Board of Examiners. The institution could request a hearing before the review committee, the board, or both. The recommendation of the Board of Examiners was sent to the Commissioner of Education, who, in turn, made a recommendation to the State Board of Education. The institution could obtain a hearing before the commissioner or the board, or both. The final approval rested with the State Board of Education.

Only a few institutions have not been approved. A large number of programs have been turned down, and there has been considerable curtailment of graduate programs. No institution has met all of the standards in full, and it is doubtful that such will occur, since the standards are qualitative in nature, and should continue to encourage improvement of programs by being continuing goals rather than finite ones.

Every institution has reported that the standards have resulted in some improvements. Prior to the coming of the visitation committee the institution prepares detailed reports based on the standards, and as a result the college becomes aware of its own shortcomings, and steps are taken to remedy them.

The standards have resulted in improvements, not only in teacher education, but in academic foundations as well. Curriculum revision in teacher education has led to general curriculum revision; concern for admissions to teacher education has led to a restudy of general admissions; a study of the use of the library for teacher education has caused the total library to be studied.

The standards approach was used for two primary reasons: it has excellent precedence in academic circles, and it provides through its statements of qualitative goals incentives for continuing growth. The use of qualitative standards as the measuring stick for quality of instruction is common at all levels of education. Regional accrediting associations, such as the Southern Association of Schools and Colleges, have long used descriptive standards which contain a minimum of specific quantitative requirements. These same regional associations, in a cooperative effort more than twenty years ago, developed standards for the accreditation of secondary schools. These standards, called the Evaluative Criteria, have been revised every decade, but the pattern has remained that of standards which attempt to measure quality. The various associations which have undertaken the accreditation of professional schools -- law, medicine, business, teacher education -- have adopted a similar approach.

The statement of standards expressed in qualitative terms encourages continuous growth, respects individual initiative, and permits individual institutions to develop unique patterns of organization and instruction. The standards are goals; institutions may attain them in a variety of patterns. There are forty-nine senior colleges in Texas that are directly concerned with teacher education and about fifty junior colleges that may offer up to one-half of the total preparation of prospective teachers. Some of the variables within these many institutions are (1) purposes and relative emphasis on certain of the purposes; (2) types of students admitted; (3) vocational interests of the students; (4) type and extent of support; (5) size and characteristics of the faculty; and (6) extent and variety of the offerings. Strict regulations in terms of "how much and how many" would tend to limit these institutions, and to impose upon them a uniformity out of keeping with their diverse nature. Qualitative standards, on the other hand, encourage them to make maximum effort within their own institutions.

COMPARISON OF TEXAS REQUIREMENTS

This section compares the requirements of Texas with those of other states. The ranking of Texas will be shown in all areas where it is possible to d [illegible]

Legal re [illegible] e legal requirements of Texas are generally more restrictive [illegible] e other states. The minimum age of eighteen is required by Texas [illegible] y more of the other states than any other age. This is shown in the following chart:

AGE

Minimum Age	Number of States	Per Cent
20	2	4
19	3	6
18	29 *	58
17	2	4
None	14	28

In requiring teachers to be full-fledged citizens of the United States, Texas has a more exacting requirement than the majority of the states. The following chart depicts the distribution of citizenship requirements:

CITIZENSHIP

Requirements	Number of States	Per Cent
Full citizenship	19 *	38
Citizenship required, with exceptions	9	18
Citizenship not required	22	44

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* Texas is in this group.

A majority of states require an oath of allegiance of all teachers. The fifty states can be divided into two groups regarding this requirement:

OATH

Requirement	Number of States	Per Cent
Oath of allegiance	26 *	52
No oath required	24	48

Texas is one of the larger group of states, since all applicants must take an oath to uphold the Constitution of the United States and the Texas Constitution.

Fees for certificates are required by 56 per cent of the states. They are one to eight dollars in variation:

FEES

Amount of Fee	Number of States	Per Cent
$8	1	2
5	9	18
3	2	4
2	10 *	20
1	6	12
None	22	44

Texas does not require a health certificate as a statutory regulation. The chart below shows the number and per cent of states which do and do not require a health certificate:

HEALTH

Requirement	Number of States	Per Cent
Health Certificate	27	54
No health certificate	23 *	46

---

* Texas is in this group.

There are fifteen states which require one or more special courses as a statutory regulation. The number and percentages are as follows:

SPECIAL COURSES

Requirement	Number of States	Per Cent
One or more special courses	15 *	30
No special course required	35	70

Texas again has the more restrictive requirement in demanding courses in American history and one giving emphasis to both Federal and Texas Constitutions.

Educational requirements for elementary certificates. The academic foundations requirement of Texas are high in relation to most of the states. The number and per cent of states requiring more or less semester hours of academic foundations than Texas are as follows:

ELEMENTARY: ACADEMIC FOUNDATIONS

Compared to Texas Requirement	Number of States	Per Cent
More semester hours	4	8
Same number of semester hours	5	10
Fewer semester hours	21	42
Not specified	19	38

Texas requires more semester hours of academic foundations than 80 per cent of the states, if those states which do not specify their requirements are included in the total. This places Texas in the 7.5 rank for semester hours required in academic foundations.

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* Texas is in this group.

Texas has a relatively low requirement for professional education in comparison with most of the other states. There are only five states which have a lower stated requirement. The comparison of other states' requirements with Texas is as follows:

ELEMENTARY: PROFESSIONAL EDUCATION

Compared to Texas Requirement	Number of States	Per Cent
More semester hours	32	64
Same number of semester hours	9	18
Fewer semester hours	3	6
Not specified	5	10

Texas, along with nine other states, ranks 37.5 in the amount of elementary professional education required.

Texas requires more semester hours of student teaching than 62 per cent of the states. The states which do not show a student teaching requirement are included in this figure. The requirement of six semester hours, demanded by Texas, places Texas in the 13.5 rank with eleven other states.

Courses concerning content of the elementary school are required in fourteen states. Thirteen of these states specify the number of semester hours required. Texas has the lowest requirement, twelve semester hours, of these thirteen states.

Academic specialization courses for elementary teachers are required in eight states. Texas, with twenty-four semester hours in one area and twelve semester hours in several areas, and New Mexico have the highest requirement of thirty-six semester hours. Texas is one of the two states allowing two plans for the acquisition of the required semester hours in academic specialization.

Educational requirements for secondary certificates. The general education or academic foundations requirement of Texas is very high in relation to the other states which record a specified number of semester hours. No state requires more than sixty hours demanded by Texas. The relation of Texas' requirement to those of other states is as follows:

SECONDARY: ACADEMIC FOUNDATIONS

Compared to Texas Requirement	Number of States	Per Cent
Same number of semester hours	4	8
Fewer semester hours	26	52
Not specified	19	38

The high academic foundations requirement for secondary teachers in Texas places the state at the third rank.

The Texas requirement of eighteen semester hours of professional education including student teaching is shown in relation to the other states in the following chart:

SECONDARY: PROFESSIONAL EDUCATION

Compared to Texas Requirement	Number of States	Per Cent
More semester hours	18	36
Same number of semester hours	21	42
Fewer semester hours	8	16
Not specified	2	4

The above chart shows Texas to be one of the larger group of states requiring the eighteen semester hours. It also shows, however, that there are more states which demand a greater number of semester hours than those requiring fewer semester hours.

The Texas requirement of six semester hours in student teaching is the third highest requirement of all the states. Only two states require a higher number of semester hours of student teaching. Nine states require the same number of hours. The remainder of the states have a lower requirement, or do not specify a student teaching requirement.

A person training as a secondary teacher in Texas has two plans available for meeting the academic specialization requirement. The candidate may acquire twenty-four semester hours each in two subjects with twelve semester hours of advanced work in each, or forty-eight hours in a broad field of study with eighteen advanced hours. Texas does not require major and minor subjects as such but refers to the areas of concentration as alternate teaching fields. In the following paragraphs concerned with minor subject requirements, those states which have plans comparable to Texas are reviewed first. Then minimum requirements of the total number of semester hours of academic specialization (major and minor) are compared.

The Texas plan which allows courses in a broad field of study is found in two other states. Texas has the highest requirement of the three states. New Mexico is second in the number of semester hours, with thirty-six. Missouri has the lowest requirement of twenty-four hours.

The second plan which requires two areas of specialization is found in three states. Nebraska and New Mexico have comparable plans. Nebraska has a higher requirement than Texas: thirty hours in each of two subjects. New Mexico offers the same plan as Texas.

A comparison of the total minimum semester hours required in academic specialization shows that Texas demands a higher number of semester hours than thirty-two of the states which record their requirements. This may be seen in the following chart:

SUMMARY: ACADEMIC SPECIALIZATION

Compared to Texas Requirement	Number of States	Per Cent
More semester hours	6	12
Same number of semester hours	6	12
Fewer semester hours	32	64
Not specified	5	10

Texas' requirement of forty-eight semester hours for academic specialization places that state in the 10.5 rank in comparison with the other states.

Certificate issuance. Texas certificates are issued on the same basis as the majority of states, except in the time limit put on certificates. Texas is one of the eighteen states which issue life certificates. However, only two other states issue initial life certificates. Examinations are not required before a person is certified to teach in Texas. Neither is evidence of employment necessary. Texas is definitely one of the majority concerning these last two requirements, since only two states require teacher examinations and six states require evidence of employment before a person is certified to teach.

Certificate authority. The majority of states give the state board of education authority to certify teachers. Texas is one of this group. The distribution of agencies with certification authority is as follows:

CERTIFICATE AUTHORITY

Authority	Number of States	Per Cent
State Board of Education	37 *	74
State Board and other authority	8	16
State Legislature	2	4
State Superintendent of Schools	2	4
Delegated to other agency	1	2

---

* Texas is in this group.

Authority for approval of teacher education programs. The power to approve teacher education programs for Texas is placed with the State Board of Education. Placing this authority with the State Board of Education puts Texas in the large group of forty-two (84%) which allows the state board to set teacher education requirements. The distribution of authority is as follows:

APPROVAL AUTHORITY

Authority	Number of States	Per Cent
State Board of Education	42 *	84
State Superintendent of Schools	2	4
State university	2	4
Other agency	4	8

Reciprocal agreements. Accreditation by the NCATE is accepted by Texas. There are nineteen other states which recognize NCATE approval. This means that Texas will accept a graduate of an NCATE approved institution, if the student has completed the required American history and government in the Texas requirements.

Summary. The results of this study reveal that Texas is above-average in the demands made for legal requirements. Texas requirements are as restrictive as the majority of states, except in the health certificate requirement.

Texas has a higher elementary education requirement than seventy-five per cent of the states in the areas of academic foundations and specialization. Texas' student teaching requirement is higher than most states. Requirements for professional education and the content of the elementary school are low in relation to the other states.

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* Texas is in this group.

Secondary educational requirements of some of the other states exceed Texas in three areas; but only in one area does thirty-eight per cent of the states have a higher requirement. Texas, along with eight other states, has the highest academic foundations requirement. Thirty-six per cent of the states require more semester hours of professional education. Twelve per cent demand more semester hours in academic specialization.

Texas places authority for certification and approval of teacher education with the State Board of Education, as do most of the states. Texas is included in the sixty per cent of the states which recognize NCATE accreditation of teacher education institutions.

STUDY 3. CENSUS DATA RELATING TO PUBLIC SCHOOL ENROLLMENT IN TEXAS

Study Director: Robert H. Talbert

The increase during the past several decades of students enrolling in the schools of Texas is related to (1) the general population trends, including the relatively high birth rate of the past two decades; (2) the increasing emphasis toward more formal educational training; and (3) attendance factors involved in the passage of the Foundation Program Act in 1949.

1. GENERAL POPULATION TRENDS

Texas, as has been true for the United States in general, has participated in the population explosion during the past two decades. Texas has had a high birth rate and, particularly among infants and youths, a declining death rate. During the 1950-1960 decade, approximately 94 per cent of the total growth of the state's population can be accounted for by natural increase. Each decade since 1900, the population of Texas has increased by 20 per cent or more.

The increase has not been even throughout the state, primarily because of the more rapid increase of urban population over rural population. In 1960 the population of Texas was classified as 75 per cent urban and 25 per rural, with the greatest urban growth in the metropolitan areas. In 1960 the state's 21 Standard Metropolitan Statistical Areas (see Table 3.1) contained 63 per cent of the state's population. The majority of the metropolitan centers are in the eastern half of the state, accounting for the fact that the population growth has been more rapid in this section. The urban areas had a slightly higher per cent of their population under eighteen years of age. This urban growth has been caused by both natural increase and movement from rural areas, but the natural increase factor is probably more important since a high birth rate is now found in urban as well as in rural areas. The greatest growth has taken place in the suburban areas, with a tendency toward the central city area being settled by non-whites.

TABLE 3.1. STANDARD METROPOLITAN STATISTICAL AREAS IN TEXAS

CITIES		
Abilene	El Paso	Odessa
Amarillo	Fort Worth	San Angelo
Austin	Galveston-Texas City	San Antonio
Beaumont-Port Arthur	Houston	Texarkana
Brownsville-Harlingen-San Benito	Laredo	Tyler
Corpus Christi	Lubbock	Waco
Dallas	Midland	Wichita Falls

Not only is the growth more in terms of urban than rural population, but also the growth is centered in certain counties of Texas. Most of the counties have been losing population during the past two decades and only eighty-nine of the 254 counties increased in population during both the 1940-50 and 1950-60 decades. Only thirty-one counties, primarily the metropolitan areas, increased by as much as 10 per cent during the past three decades, in spite of the fact that the state population as a whole increased more than this percentage each decade.

As the state population has generally increased there has been an increase in the proportion of its population in the school ages. In

1950 about 25 per cent of the population was between the ages of five and nineteen; in 1960 this group had increased to nearly 29 per cent, with the greatest increase occurring in the five - nine and the ten - fourteen age brackets. In 1960 nearly 41 per cent of the population was under twenty; in 1950 the figure was 37 per cent. If the age-group, twenty to sixty-five, is regarded as the chief income-producing segment of the population, and children under fifteen regarded as dependent children, a dependency ratio can be determined. In 1940 there were forty-nine dependent children for each one hundred adults in the age-group twenty to sixty-five; in 1960 the number was 64.5 children for each hundred. The changes in the non-white population (98.5% Negroes) were also significant. In the decade 1950-60 the non-white population increased 22.4 per cent while the white population increased 24.5 per cent. The non-white population in 1960 was concentrated in urban areas, primarily in the central cities of the metropolitan areas. Nine metropolitan counties -- Harris, Dallas, Tarrant, Jefferson, Bexar, Galveston, Travis, McLennon, and Smith -- accounted for 58.5 per cent of the non-white population in the state. A larger percentage of the non-whites than whites were under twenty years of age (about 44.7% for non-whites; 40.3% for whites).

The increase in school-age population has been accompanied by an increase in children under school age. There has been both a higher birth rate and a greater survival rate during the dangerous early years of a child's life. Contrary to expectations, the birth rate in Texas remained high long after World War II, and now the "World War II babies" are getting married and having children. Another factor in the increased birth rate is the changing attitude about the "proper" number of children from that typical of the 1930's. Today children have almost become a status symbol among middle-class families.

Females today are having more children in the first year of marriage than did their counterparts in the decades of 1930 and 1940. That women start having babies earlier is evident from the fact that in 1950 there were 992 children per 1000 married women in the fifteen to twenty-four age-group; and in 1960 there were 1292.

In 1960, 12.1 per cent of the population was under five; in 1950 this group comprised 11.7 per cent, and in 1940, 9 per cent. The number of children under five years of age for 1000 females in the age group of fifteen to forty-four (fertility ratio) was about fifty-three in 1950, and sixty-six in 1960.

2. EMPHASIS ON MORE FORMAL EDUCATION

The increase in population has been accompanied by an increasing emphasis toward more formal educational training. Some of the factors relating to this change are intangible, such as the general hope of parents to provide more schooling for their children. Others are more tangible, such as the increased economic ability to provide this education, the relationship between higher education and increased income, and the increased educational level which adults have achieved.

For the average family in the United States and in Texas the trend from 1950 to 1960 has been one of improvement in both constant and current dollars, with the increase in buying power (real income) being less. The median family income in 1950 was $2,716; in 1960 it was $4,884. The change in family income from 1950 to 1960 in terms of percentage income distribution is shown in Table 3.2.

TABLE 3.2. PERCENTAGE FAMILY INCOME DISTRIBUTION BY INCOME GROUPS

Income Groups	1960	1950
Under $2000	18.0	36.5
$2000-$5999	44.3	52.7
$6000-$9999	25.8	7.5
$10000 and over	11.8	3.2

Table 3.2 shows an increase in the number of families in the two upper income brackets and a decrease in the lower income bracket. The income distribution varied greatly from county to county in Texas. The higher median family incomes were in the urban counties, since such income is generally related to the wealth-producing qualities of an area.

That education has an influence on income is a generally accepted fact which doubtless influences the educational expectations of parents for their children. In the nation as a whole, high school graduates have a higher average yearly income than grade school graduates, and college graduates have an average income higher than high school graduates. The beginning salaries at age twenty-five are relatively close for the three groups, with the high school graduates making about $500 more than the grade school group, and the college group making about $1000 more than the high school graduates. The largest difference is at age forty-five to fifty-four, when the college group is making $8800; the high school group, $5100; and the grade school group, $4200. (See Table 3.3.)

TABLE 3.3. AVERAGE YEARLY INCOME BY EDUCATIONAL LEVEL, 1960*

EDUCATIONAL LEVEL	AT AGE 25-34	AT AGE 35-44	AT AGE 45-54	AT AGE 55-64
College Graduates	$5500	$7500	$8800	$7000
High School Graduates	4500	5200	5100	4900
Grade School Graduates	4000	4300	4200	3800

The median family income in the United States in 1960, when ranked by size of income by the occupation of the head of family was generally higher for those occupations which required more formal education. There was also a higher percentage of "white collar" workers. In 1910, for example, 22 per cent of employed males were classified as white collar workers, 37 per cent were blue collar workers, 10 per cent were service workers, and 31 per cent were farm workers. In 1959, 42 per cent were white collar workers, and 9 per cent were farm workers. The other two percentages were relatively unchanged.

One measure of interest in education is the educational level achieved by the adult population. Information on this subject is available in two ways: (1) in terms of the median school year completed, and (2) in terms of per cent of persons in the twenty-five and over age-group reporting completion of selected years of schooling. The median year information is summarized in Table 3.4; the per cent of selected years of schooling information in Table 3.5.

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* Bureau of Labor Statistics, Occupation Outlook Handbook, 1959 edition, Bulletin 1255, p. 30

TABLE 3.4. MEDIAN SCHOOL YEAR COMPLETED FOR PERSONS 25 YEARS AND OLDER IN TEXAS, 1940-1960, BY COLOR AND SEX*

	1960	1950	1940
The State	10.4	9.3	8.5
Male	10.1	8.9	8.2
Female	10.7	9.6	8.8
White	10.8	9.7	8.9
Non-white	9.1	7.0	6.1

The median school year completed for the twenty-five and older age-group in the Texas population has risen in the last two decades. The median for the state in 1940 was 8.5 grades; for 1960 it was 10.4. In 1960, as in the past, females had a higher median than males, whites higher than non-whites, and persons in urban areas higher medians than those in rural non-farm, or rural farm areas. The urban non-white median is just slightly lower than the non-urban white. The proportion of persons twenty-five and over with no formal education has been decreasing in the past twenty years, and the proportion with high school and college training increasing. The per cent of the white adult population with no schooling has decreased from 4.8 per cent in 1940 to 3.9 per cent in 1960, while those whites with some college (one to three years) increased from 7.6 per cent to 10.5 per cent. Urban persons twenty-five and over had, on the average, more schooling than their rural counterparts. A similar situation prevailed for other groups: male whites higher than male non-whites; female whites higher than female non-whites. There are differences of educational achievement, with the

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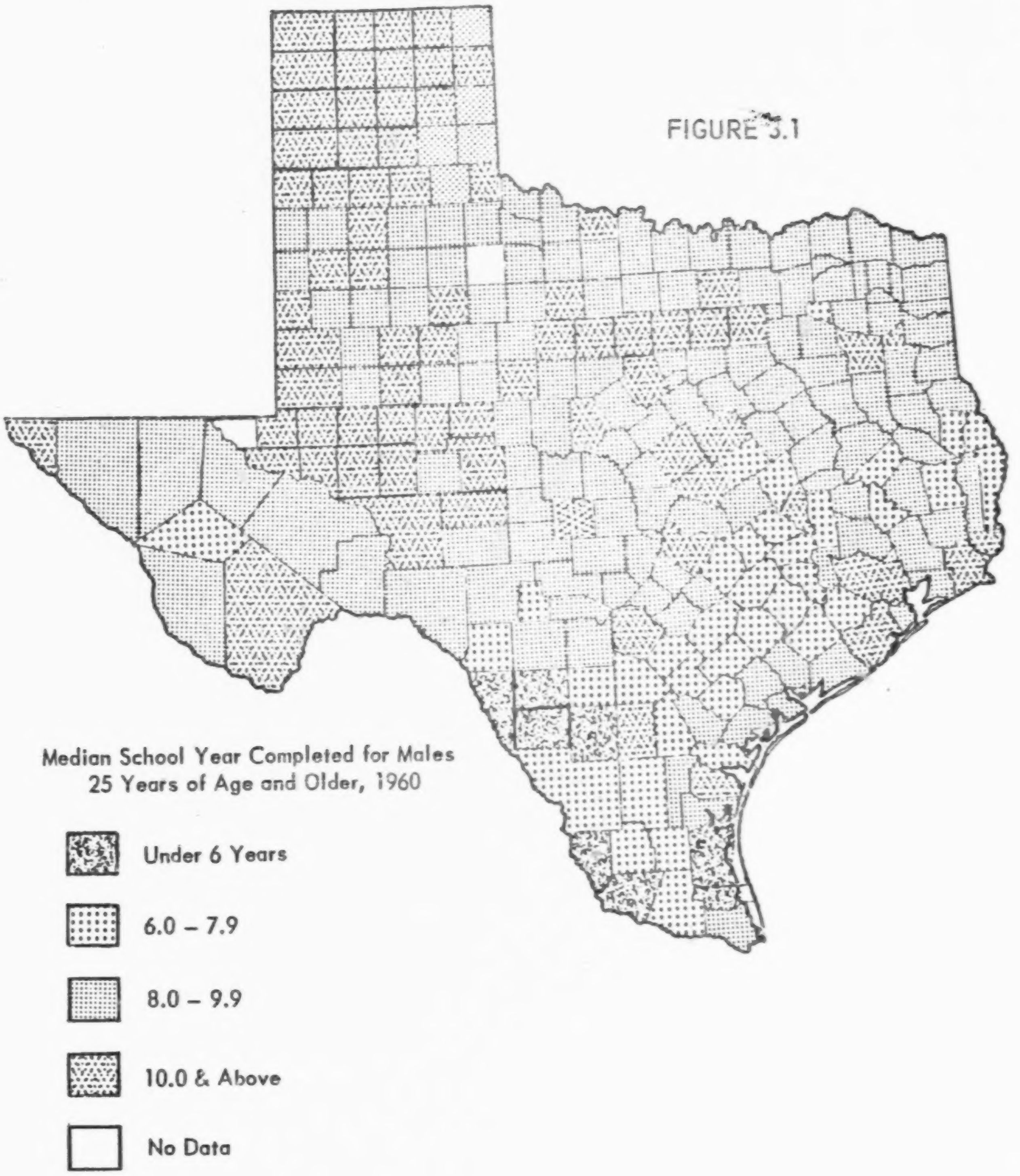
* Source: The U. S. Bureau of the Census, U. S. Census of Population: 1960, PC(1)--45C, Table 47.

FIGURE 3.1



Median School Year Completed for Males 25 Years of Age and Older, 1960

Under 6 Years
6.0 – 7.9
8.0 – 9.9
10.0 & Above
No Data

Source: 1960, PC (1) 45–C, Table 83, P. 495–516.

higher achievement levels located in the northern sections of the state, as shown in Figure 3.1, and rather predominantly in the urban areas.

TABLE 3.5. YEARS OF SCHOOL COMPLETED BY PERSONS 25 YEARS AND OLDER IN TEXAS: PERCENTAGE DISTRIBUTION BY COLOR AND SEX, 1960, 1950, 1940 *

YEARS COMPLETED	WHITE			NON-WHITE		
	1960	1950	1940	1960	1950	1940
			Per Cent			
None	3.9	4.2	4.8	5.4	5.9	8.2
1-4	8.1	9.9	11.2	18.2	24.7	28.7
5-8	26.3	28.7	34.7	36.6	41.7	43.2
9-11	19.7	22.0	22.0	19.0	15.9	11.6
12	23.0	17.5	14.8	12.5	6.3	4.3
College:						
1-3	10.5	9.1	7.6	4.4	3.1	2.5
4 or more	8.6	6.7	4.9	4.0	2.6	1.6

	MALE			FEMALE		
	1960	1950	1940	1960	1950	1940
			Per Cent			
None	4.2	4.5	5.5	3.9	4.2	5.1
1-4	10.6	13.2	15.4	8.1	10.3	11.9
5-8	28.4	33.1	37.0	26.6	30.9	34.7
9-11	18.5	19.9	19.4	20.7	22.5	21.6
12	18.6	14.1	11.6	24.7	18.0	21.6
College:						
1-3	9.9	8.2	6.3	9.7	8.6	7.6
4 or more	9.8	6.9	4.8	6.4	5.5	4.1

The number of graduates of Texas colleges and universities receiving a first degree (bachelor's degrees of all kinds and such specialty degrees as doctors of medicine and dentistry) for 1955-56 to 1958-59 is shown in

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* Source: The U. S. Bureau of Census, _U. S. Census of Population: 1960_, PC (1)—45C, Table 47.

Table 3.6, which also gives the number of first degrees in the United States. Table 3.7 gives the number receiving Texas teaching certificates.

For each of the years for which information was available the number of Texas graduates represented a steady 5 per cent of the number of United States graduates. Each year, about twice as many men as women completed Texas colleges, and the annual increase in enrollment was greater for men than women. For each of the years the teacher certification group represented about 30 per cent of the total Texas graduates, with a high of 36.8 per cent in 1955-56 and a low of 30.6 per cent in 1958-59. About 65 per cent of the women graduates received teaching certificates, with a high of 67.7 per cent in 1955-56 and a low of 63.7 per cent in 1958-59. About 18 per cent of the men graduates received teaching certificates, with a high of 20.2 per cent in 1955-56 and a low of 15 per cent in 1958-59.

TABLE 3.6. NUMBER OF FIRST DEGREES, U. S. AND TEXAS: 1955-56 to 1958-59

UNITED STATES:	1955-56	1956-57	1957-58	1958-59
FIRST DEGREES				
Men	199,571	222,738	242,948	254,868
Women	111,727	117,609	122,800	130,283
Total	311,298	340,347	365,748	385,151
TEXAS:				
FIRST DEGREES				
Men	10,740	12,058	13,179	13,556
Women	5,777	5,831	6,142	6,404
Total	16,517	17,889	19,321	19,960
Per Cent of U. S. Total	5.3	5.2	5.2	5.1

TABLE 3.7. TEXAS CERTIFICATES, 1955-56 to 1958-59

Texas: TEACHER CERTIFICATION	1955-56	1956-57	1957-58	1958-59
Men	2,173	2,165	2,426	2,039
Per Cent of Men Texas Bachelors	20.2	17.9	18.4	15.0
Women	3,913	3,822	4,022	4,085
Per Cent of Women Texas Bachelors	67.7	65.5	65.4	63.7
Total Certified	6,086	5,987	6,448	6,124
Per Cent of Total Texas Bachelors	36.8	33.4	33.3	30.6

3. FOUNDATION SCHOOL PROGRAM ACT OF 1949

Of the many principles embodied in the Foundation Program Act, two especially are related to census data. The first principle was the use of average daily attendance (ADA) of pupils instead of number of scholastics as the basis for state allotment of school funds to local districts. The second was the establishment of a minimum salary schedule for teachers which would enable those districts with less local money to attract adequately prepared teachers.

The shift from scholastics to average daily attendance brought into sharp focus the non-white population, since in order to draw funds for the children of this group the local districts had to have them enrolled in school. Probably one of the more significant consequences of the Foundation Act has been the increased enrollment of Negro and Spanish-name children. Table 3.8 summarizes this increase.

TABLE 3.8. PROPORTION OF SCHOLASTIC POPULATION AND AVERAGE DAILY ATTENDANCE IN TEXAS*

	PER CENT AVERAGE DAILY ATTENDANCE		
SCHOOL YEAR	WHITE	NEGRO	TOTAL
1942-43	67.6	66.1	67.4
1943-44	67.5	66.6	67.3
1944-45	68.2	68.0	68.2
1945-46	69.2	68.8	69.1
1946-47	70.7	70.8	70.7
1947-48	71.3	71.0	71.3
1948-49	73.8	73.4	73.8
1949-50	74.0	74.5	74.1
1950-51	77.2	80.1	77.5
1951-52	78.1	80.0	78.4
1952-53	79.3	78.7	79.2
1953-54	80.8	81.0	80.9
1954-55	82.5	83.6	82.7
1955-56	82.1	84.1	82.4
1956-57	82.7	85.5	83.1
1957-58	81.4	83.3	81.7
1958-59	83.2	86.6	83.6
1959-60	82.8	85.8	83.2

*Based on Annual Statistical Report, TEA, 1942-60.

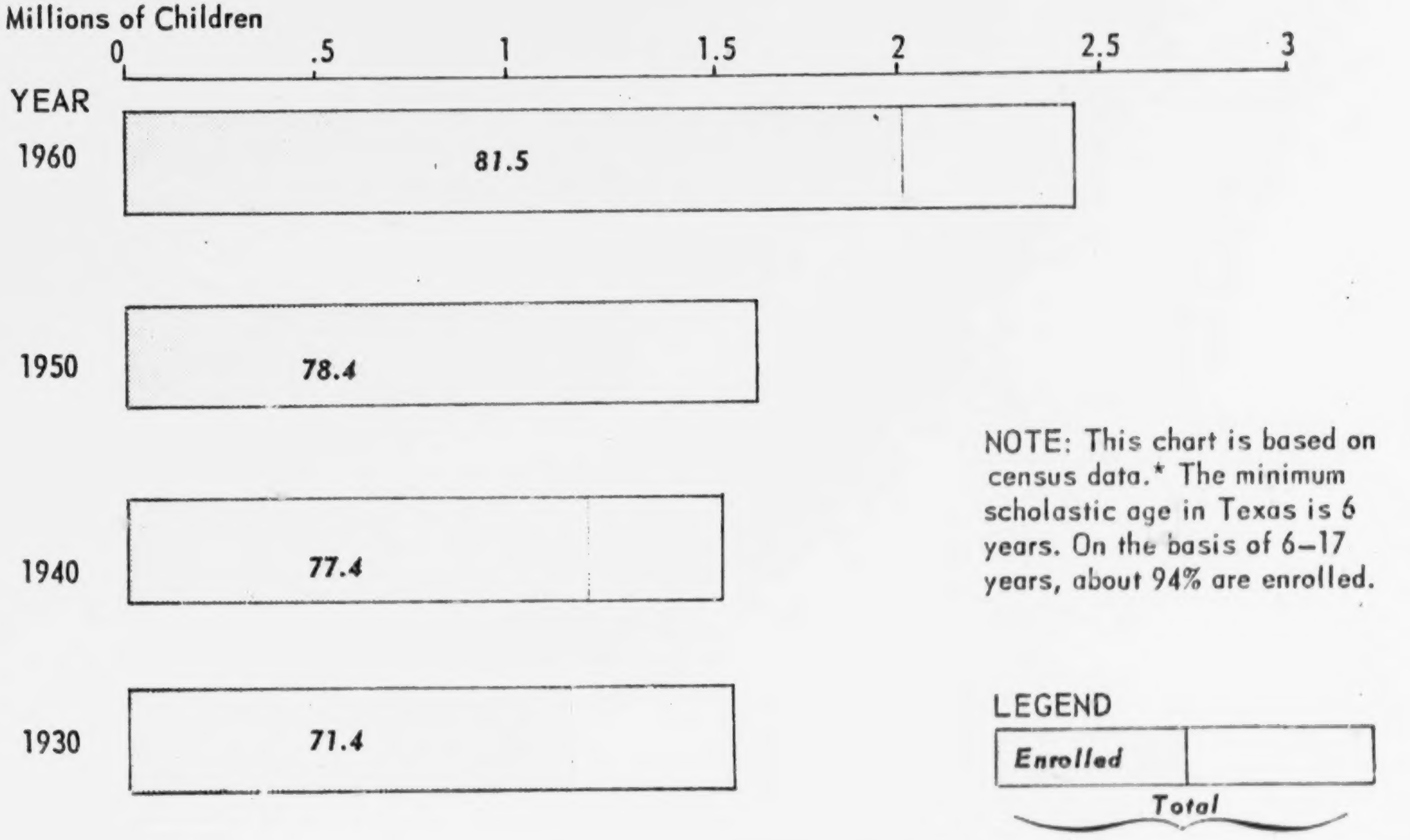
In 1942-43 the white average daily attendance was 67.6 per cent of the white scholastics; the Negro ADA was 66.1 per cent of the Negro scholastics. Six years later, in 1948-49, the white ADA was 73.8 per cent of the white scholastics. The figure for Negroes was 73.4 per cent. In 1959-60 the percentage for whites was 82.8 and for Negroes 85.8. This trend of a larger percentage of Negro scholastics in school begins in 1949-50, and is probably a direct effect of the Minimum Foundation Act.

Increased enrollment, however, has not been limited to the non-white group. School enrollment in Texas from 1930 to 1960 has shown a marked growth both in numbers of students in schools and in the percentage of total persons in appropriate age-groups who are in schools. As the population of Texas increased 64.5 per cent from 1930 to 1960, the five to seventeen age-group increased 55.6 per cent, but the increase in enrollment for this group was 77.8 per cent. This increase in enrollment is shown graphically in Figure 3.2. In 1930 there were 1,627,836 children in the age-group five to seventeen, of which 71.7 per cent were enrolled. In 1940 the age-group population was 1,601,087, of which 77.4 per cent were enrolled. In 1950 the population was 1,695,670 with 78.4 per cent enrolled, and in 1960 the population of this age-group was 2,533,733 with 81.5 per cent enrolled.

That there is a drop-out problem in Texas is evident from the decreased enrollment of the sixteen and seventeen age-group. This is particularly marked in urban areas; there is a higher percentage of this age group enrolled in rural farm areas.

The establishment of a minimum state salary for teachers was an important aspect of the Foundation Program Act. It was hoped that the salary schedule would enable school districts with less local money to employ

FIGURE 3.2 CHILDREN (5–17) IN TEXAS, 1930 – 1960:
TOTAL NUMBER AND TOTAL ENROLLED IN SCHOOL



NOTE: This chart is based on census data.* The minimum scholastic age in Texas is 6 years. On the basis of 6–17 years, about 94% are enrolled.

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* Source: U.S. Bureau of the Census, U.S. Census of Population: 1960, PC(1) – 45C, Table 45.

teachers, and would enable the schools of Texas in general to attract the kinds of persons needed for teaching in our society. Such a concept raises this question: are teachers' salaries competitive with those in other professions with similar training requirements and status? In the United States in 1960 the median salary for urban classroom teachers was $5,510. This figure is above the median family income for service workers, and below that for operatives and kindred workers. The average annual earnings of teachers is slightly below that of civilian employees of the federal government, and above employees in manufacturing. The annual salary of teachers in Texas was 93.2 per cent of the annual salary of teachers in the United States in 1958-59; in 1959-60 it was 89.4 per cent and in 1960-61 it was 86.6 per cent. The figures for 1961-62, which would have shown the recent salary increase in Texas, are not yet available.

STUDY 4. SUPPLY AND DEMAND OF TEACHERS IN TEXAS

Study Director: Sandy A. Wall

Educators have noticed in the past several years that while there is a teacher shortage, it is limited to geographical areas and to some subject fields. In fact, many educators prefer not to use the term "shortage," preferring instead the term "imbalance." The degree of imbalance of teachers is difficult to determine accurately. New teachers are needed to replace retirements and dropouts, and to teach the increasing number of children. Two sources give some information on the number of new teachers employed each year who had no previous teaching experience. One of these is the T. E. A. Annual Statistical Summary, which reports the number of teachers by years of experience. Another is the Teacher Supply and Demand Report, which comes from the individual colleges having teacher education programs, and which is summarized by the Agency, and forwarded to the National Education Association to become a part of the national annual report on supply and demand.

While the "no experience" line of the statistical summary does not include the newly employed teachers who have had experience, such as out-of-state teachers or teachers returning to the profession after a leave of absence, it probably does include emergency permit teachers and teachers just out of college. The usual employment practice is for the majority of June or August graduates with certificates to enter teaching in the fall of that year. In all likelihood they comprise the major portion of the "no experience" group. It seems logical, therefore, that a comparison of the "no experience" teachers and the certification group, both the total group and that segment teaching in the state, might reveal the degree and direction of the imbalance.

Table 4.1 shows the supply of new teachers produced in 1960-61 in the United States. Table 4.2 gives this information for Texas. Usually these students would have completed certification requirements at the end of the school year 1960-61, and would be eligible for teaching jobs in the fall of 1961 for the school year 1961-62. The figures are given in percentages so that a comparison could be made. The number of graduates by each field and by totals are given in a separate column.

Texas had fewer teachers leaving the state to teach than the nation as a whole. Six per cent of the Texas supply were teaching out of state. The range was from zero in agriculture to 15 per cent in library science. In the nation, 16 per cent taught out of the state in which they were prepared. The range was from 10 per cent in "others" to 21 per cent in both library science and women's physical education. As will be shown later, the three most critical areas of shortage in Texas are elementary, science, and mathematics teachers. Texas had a larger per cent in all of these areas who did not enter teaching than did the nation as a whole. For example 78 per cent of the Texas certification group prepared in elementary teaching actually entered teaching, while 83 per cent of this national group did so.

Table 4.3 shows the distribution of four 1961 groups: (1) total teachers in Texas schools, excluding administrators and special services personnel; (2) employed new teachers, the "no years experience" group; (3) that portion of the certification group teaching in the state; and (4) the total certification group. About 58 per cent of the teachers in

TABLE 4.1. 1961 GRADUATES WITH QUALIFICATIONS TO TEACH.

PER CENT TEACHING AND NOT TEACHING: U. S.[a]

	TEACHING			NOT TEACHING	NO. OF GRADUATES
	IN STATE	OUT OF STATE	TOTAL		
FIELD	%	%	%	%	
Agriculture	45	6	51	49	1060
Art	54	15	69	31	2148
Commerce	47	13	60	40	5648
Foreign Language	55	17	72	28	2273
Home Economics	52	14	66	34	3963
Ind. Arts	53	18	71	29	2977
Lang. Arts [b]	55	18	73	27	10933
Library Science	50	21	71	29	415
Mathematics	59	16	75	25	5593
Music	55	17	72	28	4338
Science	52	16	67	33	6385
Social Science	50	15	65	35	11989
P. E. - Men	51	15	66	34	6194
P. E. - Women	59	21	80	20	2789
Other	50	10	60	40	1593
Total Sec.	53	16	68	32	68298
Total El.	67	16	83	17	45749
GRAND TOTAL	59	16	75	25	114047

[a] N. E. A. Research Division, Bulletin 1962-R8, Teacher Supply and Demand in Public Schools, 1962, p. 26

[b] Includes English, Journalism, Speech, Drama

TABLE 4.2. 1961 GRADUATES WITH QUALIFICATIONS TO TEACH.

PER CENT TEACHING AND NOT TEACHING: TEXAS.[a]

	TEACHING			NOT TEACHING	NO. OF GRADUATES
FIELD	IN STATE %	OUT OF STATE %	TOTAL %	%	
Agriculture	50	0	50	50	185
Art	62	2	64	36	106
Commerce	46	3	49	51	479
Foreign Language	73	5	78	22	90
Home Economics	52	3	55	45	332
Ind. Arts	60	2	62	38	169
Lang. Arts[b]	64	7	71	29	834
Library Science	67	15	82	18	39
Mathematics	65	5	70	30	332
Music	71	5	76	24	331
Science	56	5	61	39	299
Social Science	59	5	64	36	602
P. E. - Men	64	4	68	32	550
P. E. - Women	71	6	77	23	195
Other	60	5	65	35	110
Total Sec.	60	5	65	35	4653
Total El.	70	8	78	22	2429
GRAND TOTAL	64	6	70	30	7082

[a] T. E. A., Texas Teacher Supply and Demand in Public Schools, 1962, "State Summary."

[b] Includes English, Journalism, Speech, Drama.

TABLE 4.3. 1961 TEXAS TEACHERS: DISTRIBUTION BY TEACHING FIELDS

Col. 1	Col. 2 TOTAL TEACHERS[a]		Col. 3 EMPLOYED NEW TEACHERS[b]		Col. 4 PREPARED TO TEACH AND TEACHING IN STATE[c]		Col. 5 PREPARED TO TEACH: TOTAL GROUP	
	No.	%	No.	%	No.	%	No.	%
Agriculture	1140	1.5	63	1.0	93	2.1	185	2.6
Art	446	.6	45	.8	66	1.5	106	1.5
Commerce	1502	1.9	142	2.4	221	4.9	479	6.8
Foreign Language	787	1.0	68	1.1	66	1.5	90	1.3
Home Economics	1764	2.2	148	2.5	173	3.9	332	4.7
Ind. Arts[d]	1042	1.3	82	1.4	101	2.2	169	2.4
Lang. Arts[d]	5928	7.6	591	9.8	534	11.8	834	11.8
Library Science	1167	1.5	24	.4	26	.6	39	.5
Math	3846	4.9	342	5.7	216	4.8	332	4.7
Music	1281	1.6	113	1.9	235	5.2	331	4.7
Science	2855	3.6	340	5.6	167	3.7	299	4.2
Social Science	3495	4.5	357	5.9	353	7.8	602	8.5
P E - Men	1345	1.7	98	1.6	353	7.8	550	7.8
P E - Women	1097	1.4	116	1.9	139	3.1	195	2.7
Multiple Assignments	5275	6.7	612	10.1	60[e]	1.3	110[e]	1.5
Total Sec.	32970	42.0	3141	52.1	2803	62.2	4653	65.7
Total El.	45578	58.0	2894	47.9	1706	37.8	2429	34.3
Grand Total	78548	100.0	6035	100.0	4509	100.0	7082	100.0

[a] T E A Statistical Summary, 1960-61.

[b] *Ibid.*, "No years experience" line.

[c] T E A Teacher Supply and demand in public schools. 1961.

[d] Includes English, journalism, speech, drama.

[e] "Other".

Texas schools were in elementary schools and 42 per cent were in secondary. There were about 8 per cent of these teachers whose major assignment was language arts, but this group was composed of teachers of English, journalism, speech, and drama. About 7 per cent had multiple assignments, meaning that they were probably teaching in three fields with no single subject a major assignment. Nearly 5 per cent were in mathematics, about 4 per cent each in social science and science. About 48 per cent of the newly employed teachers were in elementary school assignments, 10 per cent were in multiple assignments, 10 per cent in language arts, and 6 per cent each in social science, mathematics, and science.

The total number of teachers with no experience, 6035, is 7.6 per cent of the total number of teachers. The "no-experience" teachers in library science comprised 2 per cent of the total library science teachers. This was the smallest per cent of this "no-experience" group. Science had 12 per cent of its total teachers with no experience; the multiple assignment group had 11.6 per cent, social science and language arts each had 10 per cent, and commerce had 9 per cent.

Table 4.3 also gives information about the newly prepared teachers (column 4), both those teaching in the state and the total group (column 5). Comparison of columns 4 and 5 with column 3 indicates several areas of disparity. The degree of this imbalance is shown in Table 4.4 and 4.5.

Table 4.4 shows the comparison between the Texas certification group and new teachers employed in the state with no experience. Not including the multiple assignment group, for which colleges usually do not have certification programs, there were nine subject areas in which the number of the in-state certification group exceeded the number of "no-experience" teachers.

TABLE 4.4. TEXAS: NEW TEACHERS EMPLOYED IN 1961-62 AND CERTIFICATION GROUP TEACHING IN STATE

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5[d]	
	NEW TEACHERS NO EXPERIENCE[a]	CERTIFICATION GROUP 1961 TEACHING IN STATE[b]	DIFFERENCE	PER CENT	
				SURPLUS %	SHORTAGE %
Agriculture	63	93	- 30	48	
Art	45	66	- 21	47	
Commerce	142	221	- 79	56	
Foreign Language	68	66	+ 2		3
Home Economics	148	173	- 25	17	
Ind. Arts	82	101	- 19	23	
Lang. Arts	591	534	+ 57		10
Library Science	24	26	- 2	8	
Math	342	216	+ 126		37
Music	113	235	- 122	108	
Science	340	167	+ 173		51
Soc. Science	357	353	+ 4		1
P E - Men	98	353	- 255	260	
P E - Women	116	139	- 23	20	
Multiple Assign.	612	60[c]			
Total Sec.	3141	2803	+ 338		11
Total El.	2894	1706	+1181		41
Grand Total	6035	4509	1526		25

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[a] T E A STATISTICAL SUMMARY, 1960-61, "No years experience" line.

[b] T E A SUPPLY AND DEMAND IN PUBLIC SCHOOLS, 1961.

[c] "Other".

[d] Imbalance.

TABLE 4.5. TEXAS: NEW TEACHERS EMPLOYED IN 1961 [illegible]

TOTAL CERTIFICATION GROUP PRODUCED IN TEXAS

Col. 6	Col. 7	Col. 8	Col. [illegible]	
NEW TEACHERS NO EXPERIENCE[a]	TOTAL CERTIFICATION GROUP[b]	DIFFERENCE	PER CENT	
			SURPLUS %	SHORTAGE
63	185	122	194	
45	106	61	136	
142	479	337	237	
68	90	22	32	
148	332	184	124	
82	169	87	106	
591	834	243	41	
24	39	15	63	
342	332	10		3
113	331	218	193	
340	229	41		12
357	602	245	69	
98	550	452	461	
116	195	79	68	
612	110[c]			
3141	4653	1512	48	
2894	2429	465		16
6035	7082	1047	17	

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[a] T E A STATISTICAL SUMMARY 1960-61, "No years experience" line.

[b] T E A SUPPLY AND DEMAND IN PUBLIC SCHOOLS, 1961.

[c] "Other". This category includes teachers prepared for multiple assignment, but the two categories are not comparable because other subjects are included.

[d] Imbalance.

For example, the number of men physical education majors in the in-state certification group exceeded the number of no-experience teachers with that major teaching assignment by 260 per cent. The smallest per cent of excess was in library science (8 per cent). There were, including elementary education, six areas in which the number of the in-state certification group was less than the number of "no-experience" teachers. For example, the number of science majors in the in-state certfication group was less than the number of "no-experience" teachers with that major teaching assignment by 51 per cent. The smallest number involved was in foreign language. The largest number of teachers involved was in elementary education, where the difference was 1,181, or 41 per cent.

The "in-state teaching" figures are more realistic in determining actual imbalance. However, on a theoretical level the total certification group yields some points of interest. Table 4.5 shows this information. If all of the group who completed certification requirements had been employed in the Texas schools, where they were actually needed, there would have been only three areas in which there would have been a negative imbalance: elementary education (16%), science (12%), and mathematics (3%). Fields in which there would have been a heavy over-imbalance of teachers were men physical education teachers (461%), commerce (237%), agriculture (194%), music (193%), art (136%), home economics (124%), and industrial arts (106%).

The available data on the certification group reported only the major, and not the minor, which is usually the second teaching field. Similarly the no-experience group was reported by major teaching assignment, not the second teaching assignment. Nevertheless it is interesting to speculate on some aspects of the material in Table 4.4. Where did the 1,181 elementary teachers come from? There are, of course, those who had been prepared in institutions out of Texas. According to the N E A Research Division about 16 per cent of elementary teachers in the nation at large teach outside of the state in which they received their preparation. There are also those teachers whose certification had been completed in years earlier than the one immediately preceding their employment. But where did the rest come from? It is unusual to find elementary education as a college minor, and therefore one might reasonably conclude that there were a relatively large number of first year elementary teachers who did not have preparation deemed adequate by the Texas Standards for Teacher Education. Since minors are usual in programs for secondary teachers, it is possible, in addition to the out-of-state group and the previously certified group, that the imbalance in secondary fields could be accounted for by minors. Nevertheless over half of the teachers assigned to science (173) and over one-third of the teachers assigned to teach mathematics (126) would have to be accounted for as probably not teaching in their major field.

The opposite imbalance, that of having more of the certification group employed than there were major teaching assignments, raises the interesting question: If these new teachers are not teaching in their major field what are they teaching? What, for example, are the thirty individuals prepared to teach agriculture teaching? The agriculture education program seldom includes another teaching field as a minor. What are the seventy-nine commerce teachers teaching? Or the 122 music teachers, or the 255 men physical education teachers? It is hoped that these people had strong preparation in a second teaching field. The most enigmatic spot of all, however, is the multiple assignment group. Nearly 12 per cent of the total multiple assignment teachers in Texas are apparently teaching their first year, yet the multiple assignment teacher would have more separate preparations, some of which, almost of necessity, would have to be out of either his major or his minor teaching field. Certainly only a small number prepared for such an assignment, and apparently the colleges do not have many teacher education programs offering such preparation.

There has been some feeling that preparation in a single field was adequate for the Texas teacher. It would appear that in only a few fields could such a teacher find a position in which his single subject would constitute the only thing he taught. It was the purpose of this study to determine the nature of teacher shortage in Texas. Strictly speaking there is not so much a shortage as an imbalance. Many subject fields actually have a surplus of people prepared to teach them. While it would not be consistent with the doctrine of individual choice of occupations to require students to enter fields not of their liking, nevertheless it would be doing them an injustice not to let them know what employment opportunities are open to them.

This study should be regarded as partial and incomplete, and a more extensive study should be made incorporating (1) major and minor fields of preparation, (2) first and second fields of assignment, (3) number and teaching areas of out-of-state and previously-prepared certification groups, and (4) the emergency permit group, and (5) the nature of the multiple assignments.

STUDY 5. CHARACTERISTICS OF COLLEGE STUDENTS PREPARING TO TEACH 1961-62

The purpose of this study was to learn some of the characteristics and beliefs of students in colleges and universities who were in teacher education programs. Questionnaires (See Appendix B) were sent to thirty-eight junior colleges and forty-seven senior colleges in Texas for each student in a teacher education program to complete. The return of 17,776 questionnaires represented approximately 90 per cent of the teacher education group. A random sample of 1,976 (11%) was drawn using a standard table of random numbers. A check of the sample indicated that all institutions were represented in the sample in a proportion equal to the total number of students. The questionnaire was designed to discover (1) personal characteristics of those preparing to teach, (2) motivation for teaching as a career, (3) academic majors and minors, (4) ranking of importance and performance of curriculum areas generally covered in Texas high schools, (5) ranking of importance and performance of the tasks of education, and (6) the degree of progressivism and traditionalism in the students' beliefs. Not all of the questionnaire items are reported in this digest.

CLASSIFICATION DATA

White females constituted the largest group (60%) of those preparing to teach. White males were the next largest group (33%). Negroes comprised 7 per cent of the total, with females about twice as numerous as males. Only about one-half as many Negroes are preparing to teach as their group is represented in the total population of Texas. More than half of all of the students ranked in the upper 20 per cent in their high school graduating class. Over three-fourths had A or B averages in high school work. Teacher education apparently has attracted students who compare most favorably with any other group of students on their campuses. The students as a group come from lower-middle class homes. Studies in other states have indicated that the great majority of public school teachers come from middle class backgrounds. The majority of students reported that they planned to remain in the teaching profession for ten years. A large number, however, were undecided. It would appear that many are not thinking of teaching as a life-long pursuit. No single person, either parent or teacher, was most influential in the decision to prepare to teach. The largest single group of students were working toward the degree of Bachelor of Science in Elementary Education, followed closely by those seeking the Bachelor of Arts degree. The students were asked to indicate their resons for entering teaching. Nearly two-thirds gave humanitarian motives ("Teaching offers the opportunity to be associated with young people" or "Teaching offers a real opportunity to be of service to mankind."). Over half of the students felt that teaching offered them job security. Over one-third checked the single economic item, "Teaching is a good job to be able to fall back on if needed."

Students planning to teach in secondary school were majoring predominantly in social sciences (14%), English-language arts (15%), physical education (10%), mathematics (6%), and business (5%). Other fields had less than 5 per cent. Science appeared more frequently as a second major or a minor than as a first major, and biology was much more prevalent than either chemistry or physics.

CURRICULUM AREAS

The two sections on curriculum areas and educational tasks were adapted from a study made by Richard F. Carter of Stanford University and used with his permission. Both sections called for two responses, one indicating the importance of the item, and the other indicating how well the item was being performed in the public schools. Ranking was not called for; each item could be marked with any of five replies. If a person thought that all items were equally important, he could so indicate. A ranking of importance and performance was obtained by omitting the "don't know" and the "no response" columns, weighing each of the other replies, and obtaining a mean of the rankings. Rank orders of the items were also obtained. Mathematics, language arts, social science, and science all ranked in the first four places for both junior and senior college students. Trade training, practical arts, fine arts, and driver education occupied the lower four positions. The results are shown in Table 5.1. The two groups agreed generally that the level of performance was not so high as the level of importance, except for driver education, which was much better performed than it was important. Mathematics, language, social science, and health and physical education occupied the four top positions. Science, which ranked fourth in importance, ranked fifth in performance. Driver education, ranked last in importance, ranked seventh in performance; foreign language, ranked sixth in importance, ranked ninth in performance. The results are shown in Table 5.2.

EDUCATIONAL TASKS

Some frequently listed tasks of education were included in the questionnaire. The list, purposely, included some items which are

TABLE 5.1. CURRICULUM AREAS: PERFORMANCE

Curriculum Areas	Junior College		Senior College		Total	
	Mean	Rank	Mean	Rank	Mean	Rank
Mathematics	3.109	2	3.135	1	3.132	1
Language	3.179	1	3.096	2	3.106	2
Social Sciences	3.053	3	2.894	4	2.912	4
Science	2.891	5	2.890	5	2.890	5
Driver Education	2.609	8	2.736	7	2.722	7
Health and Physical Education	2.966	4	2.925	3	2.929	3
Trade Training	2.462	10	2.567	10	2.554	10
Practical Arts	2.793	6	2.794	6	2.794	6
Fine Arts	2.646	7	2.668	8	2.666	8
Foreign Language	2.596	9	2.573	9	2.576	9

TABLE 5.2. CURRICULUM AREAS: IMPORTANCE

Curriculum Area	Junior College		Senior College		Total	
	Mean	Rank	Mean	Rank	Mean	Rank
Mathematics	3.712	2	3.711	2	3.711	2
Language	3.770	1	3.850	1	3.841	1
Social Sciences	3.355	3	3.453	3	3.441	3
Science	3.315	4	3.382	4	3.374	4
Driver Education	2.306	10	2.448	10	2.431	10
Health and Physical Education	3.245	5	3.247	5	3.264	5
Trade Training	2.929	7	2.998	7	2.990	7
Practical Arts	2.767	8	2.917	9	2.900	9
Fine Arts	2.715	9	2.966	8	2.937	8
Foreign Language	3.046	6	3.122	6	3.113	6

presently controversial. The same statistical analysis used for analysis of curriculum areas was applied. The results are shown in Table 5.3 for importance and Table 5.4 for performance. Both groups agreed that (1) citizenship, (2) independent study, and (3) working with others were the top three tasks of education. Of least importance were (1) guidance, (2) Texas, (3) social problems, and (4) internationalism. The students agreed that performance was not so high as the level of importance, and the difference was more marked than it was in the curriculum areas. The four top items in performance were (1) citizenship, (2) college preparation, (3) work with others, and (4) Texas. The four low items in performance were (1) creativeness, (2) independent study, (3) internationalism, and (4) guidance. With the present importance of international relations to world survival, the low ranking given to this area is difficult to comprehend.

PROGRESSIVISM AND TRADITIONALISM

The Kerlinger Education Attitude scale by which tendencies toward, and degrees of, progressivism and traditonalism could be determined was administered to the college student group. (This scale has been described in the digest of Study One.) The scale yields three scores: an "A" score, indicating Progressivism; a "B" score, indicating Traditionalism; and an "A-B" (difference) score, indicating consistency of belief. The results are shown in Table 5.5. Senior college students were more progressive than junior college students. The position of college student in relation to other groups on this scale can be seen from a comparison of these results with those found by Wall in Study One. The "A-B" score indicating consistency of belief was higher also for the senior college group.

TABLE 5.3. TASKS OF EDUCATION: IMPORTANCE

	Junior College		Senior College		Total	
	Mean	Rank	Mean	Rank	Mean	Rank
Citizenship	3.808	1	3.812	1	3.812	1
Emotion	3.648	5	3.674	4	3.671	4
Guidance	3.099	12	3.078	12	3.091	12
Occupations	3.376	8	3.412	7	3.408	7
International	3.288	9	3.301	9	3.299	9
Independent Study	3.794	2	3.779	2	3.780	2
Work With Others	3.755	3	3.778	3	3.776	3
Family	3.385	7	3.354	8	3.358	8
Texas	3.256	10	3.207	11	3.213	11
Social Problems	3.198	11	3.235	10	3.231	10
Creativeness	3.495	6	3.592	6	3.581	6
College Preparation	3.678	4	3.605	5	3.614	5

TABLE 5.4. TASKS OF EDUCATION: PERFORMANCE

	Junior College		Senior College		Total	
	Mean	Rank	Mean	Rank	Mean	Rank
Citizenship	3.029	1	2.953	1	2.962	1
Emotion	2.611	8	2.603	5	2.604	5
Guidance	2.310	12	2.215	12	2.226	12
Occupations	2.736	5	2.586	7	2.603	6
International	2.579	10	2.460	11	2.474	11
Independent Study	2.670	6	2.517	10	2.534	10
Work With Others	2.874	3	2.945	3	2.937	3
Family	2.572	11	2.597	6	2.594	7
Texas	2.851	4	2.872	4	2.870	4
Social Problems	2.625	7	2.569	8	2.575	8
Creativeness	2.610	9	2.544	9	2.552	9
College Preparation	2.954	2	2.951	2	2.951	2

TABLE 5.5. KERLINGER'S EDUCATION SCALE

Means, Standard Deviations, and Standard Errors of the Means

Scale	Junior College	Senior College	Total
A			
Mean	4.988	5.071	5.061
Standard Deviation	.723	.682	.687
Standard Errors of the Means	.047	.016	.020
Number	236	1,740	1,976
B			
Mean	4.770	4.592	4.613
Standard Deviation	.742	.712	.716
Standard Errors of the Means	.049	.017	.021
Number	236	1,740	1,976
A-B			
Mean	.218	.479	.448
Standard Deviation	.796	.863	.855
Standard Errors of the Means	.052	.021	.025
Number	236	1,740	1,976

STUDY 6. UNDERGRADUATE TEACHER EDUCATION PROGRAMS IN TEXAS COLLEGES 1960-61

Study Director: Margaret R. Rouse

Material for this study was obtained from a questionnaire (See Appendix C) sent to those senior colleges of Texas having teacher education programs. Replies were obtained from thirty-four of the fifty-three colleges. These thirty-four colleges prepared 74 per cent of the teachers who graduated in the school year 1960-61. The report is limited to these thirty-four colleges, and though it does not include all of the teacher education institutions, it gives a fairly accurate picture of teacher education for the year reported. Information from the colleges included the following: (1) classification of colleges; (2) information about students graduating in 1961; (3) analysis and comparison of graduates; (4) descriptions of teacher education programs; and (5) major developments in teacher education, particularly major strengths and weaknesses.

CLASSIFICATION OF COLLEGES

Of the thirty-four colleges reporting, twenty-five or 73.5 per cent were multipurpose universities or colleges; thirteen or 38 per cent were state supported, and twenty-one or 62 per cent were privately supported. Bachelor degree students completing teacher education programs in 1961 numbered 5,190. Ninety-two per cent of these students were in multipurpose universities or colleges. There were 69.3 per cent of these students in state schools and 30.7 per cent in private schools.

STUDENTS GRADUATING IN 1961

There were 9,254 men and 5,535 women, a total of 14,789, receiving bachelor's degrees in 1960-61 from these thirty-four institutions. Of these, 1,699 men and 3,491 women, a total of 5,190, or 36 per cent, also completed teacher education programs. While men were in the majority of the total degree group (62% men and 38% women) the reverse was true of the teacher education group (67% women and 33% men).[1]

Many of the reporting institutions had over 50 per cent of their graduates in teacher education programs.

Although several different grading systems are used in the reporting institutions, it was possible to convert them to a 4-point scale, in which A = 4, and 2 equals the usual requirement for graduation. As a whole, the teacher education group had a mean grade point average of 2.719, slightly higher than 2.659, the mean grade point average for the total bachelor's degree group. In 6 per cent of the institutions the grade point averages were the same for the two groups; in 12 per cent of the institutions the grades for the teacher education were lower; in 82 per cent of the institutions the teacher education group had higher grades.

In addition to the bachelors degree group, there were 701 who completed a certification program; 340 of these were classified as post graduates and 361 as graduates.

ANALYSIS AND COMPARISON OF GRADUATES

The data for this section, which are summarized in Table 6.1, came from each institution's annual teacher supply and demand report. However,

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[1] In study 3 it was found that from 1956-1959 the teacher certification group was about 30 per cent of the total Texas graduates. About 65 per cent were women and 35 per cent were men. For the total degree group about 65 per cent were men and 35 per cent were women. "First degree" includes more than bachelor's degree candidates, since such professional degrees as M. D. are included.

TABLE G.1. TEACHER EDUCATION STUDENTS AND OTHER GRADUATES

TEACHER EDUCATION 1960-61

Column 1	Column 2 - TEACHER EDUCATION												Column 3			Column 4
Field of Preparation	In State No.	In State %	In State MGA	Out of State No.	Out of State %	Out of State MGA	Not Teaching No.	Not Teaching %	Not Teaching MGA	Total No.	Total %	Total MGA	Other Graduates No.	Other Graduates %	Other Graduates MGA	Grand Total
Elementary	1234	74.2	2.77	125	7.5	2.82	303	18.3	2.60	1662		2.58	0	0	0	1662
Secondary	2281	66.4	2.51	203	5.9	2.54	949	27.7	2.49	3433	52	2.51	3173	48	2.48	6606
Agriculture	70	48.9	2.42	3	2.2	N.D.	70	48.9	2.55	143	55	2.49	119	45	2.41	262
Art	44	59.5	2.56	5	6.7	3.00	25	33.8	2.63	74	54	2.69	64	46	2.63	138
Commerce	196	56.3	2.72	13	3.8	2.89	139	39.9	2.76	348	22	2.73	1255	78	2.46	1603
English	366	71.6	2.80	38	7.5	2.97	107	20.9	2.87	511	74	2.84	176	26	2.79	687
Foreign Lang.	41	70.7	2.66	3	5.1	2.71	14	24.2	2.89	58	71	2.73	24	29	2.72	82
Home Econ.	165	67.6	2.85	5	2.1	2.29	74	30.3	2.79	244	84	2.82	45	16	2.63	289
Industrial Arts	71	72.4	2.50	2	2.1	2.63	25	25.5	2.39	98	62	2.49	59	38	2.40	157
Journalism	16	61.5	2.72	0	0	0	10	38.5	2.83	26	36	2.74	46	64	2.77	72
Library Science	23	76.7	2.73	0	0	0	7	23.3	2.96	30	58	2.83	22	42	2.79	52
Mathematics	174	69.9	2.74	14	5.6	2.55	61	24.5	2.86	249	58	2.69	183	42	2.67	432
Music	171	75.3	2.79	11	4.9	2.61	45	19.8	2.87	227	83	2.83	45	17	2.91	272
Physical Ed.	370	74.9	2.44	22	4.5	2.51	102	20.6	2.50	494	93	2.46	38	7	2.23	532
Gen. Science	27	64.3	2.48	1	2.4	N.D.	14	33.3	2.65	42	37	2.49	71	63	2.76	113
Biology	72	58.9	2.69	5	4.1	2.75	46	37.4	2.64	123	40	2.54	184	60	2.64	307
Chemistry	27	55.1	2.70	1	3.0	N.D.	21	42.9	2.67	49	28	2.69	126	72	2.61	175
Physics	9	56.3	2.67	5	31.3	2.78	2	12.4	3.16	16	14	2.73	95	86	2.82	111
Social Studies	278	66.7	2.70	40	9.6	2.78	99	23.7	2.65	417	53	2.70	363	47	2.67	780
Speech	88	71.5	2.71	13	10.6	2.65	22	17.9	2.60	123	83	2.70	25	17	2.73	148
Others	43	54.4	2.82	8	10.2	2.82	28	35.4	2.49	79	25	2.37	233	75	2.65	312
Not Specified	30	36.6	N.D.	14	17.1	N.D.	38	46.3	N.D.	82	100	N.D.	0	0	N.D.	82
TOTAL	3515	69		328	6.4		1252	24.6		5099	62		3173	38		8268

some schools did not report this information, and the figures reported in this section differ from the totals described in the previous sections of this study.

There were 1,662 graduates in 1960-61 prepared to teach in elementary schools; 1,359, or 81.7 per cent, entered teaching the following school year; there were 3,433 graduates prepared to teach in secondary schools; 2,281, or 72.3 per cent, entered teaching. Of the graduates prepared to teach in elementary schools 1,359, or 81.7 per cent, entered teaching the following year, and 303, or 18.3 per cent, were not teaching. Of the 81.7 per cent teaching, 1,234, or 91 per cent, were in Texas schools; only 9 per cent were teaching out of the state. Of the graduates prepared to teach in secondary schools 2,492, or 72.3 per cent, entered teaching the following year, and 949, or 27.7 per cent, were not teaching. Of this 72.3 per cent teaching, 2,281, or 92 per cent, were in Texas schools; only 8 per cent were teaching out of the state.

Most of the colleges listed the secondary teacher group by field of preparation. Some schools, however, gave total figures only, and it was necessary to add a "not specified" classification so that the sum of the majors would equal the figure given for the total.

Twelve of the major fields had over half of their students in teacher education programs, and the following six fields had over 70 per cent of their graduates in teacher education:

Field	In Teaching
1. Physical education	93%
2. Home economics	84%
3. Music	83%
4. Speech	83%
5. English	74%
6. Foreign language	71%

The fields with the highest percentages of graduates in teacher education were not always the fields which had the highest per cent actually teaching. Physics, for example, had the highest per cent actually teaching although it had the lowest per cent of graduates in teacher education. The six fields having the highest percentage of students actually teaching are as follows:

Fields	In Teaching
1. Physics	87.5%
2. Speech	82.1%
3. Physical education	79.3%
4. English	79.0%
5. Library Science	76.6%
6. Social Studies	76.2%

TEACHER EDUCATION PROGRAMS

The Standards for Teacher Education of 1955 described the college program in terms of (1) academic foundations; (2) teaching fields or content areas; (3) professional education; and (4) electives. It set as minimum standards forty-five hours of general education, thirty-six hours of teaching fields, and twenty-four hours of professional education. In a usual bachelor's degree program of 120 hours this plan left as a maximum fifteen hours of electives. The electives, however, vary in both individual colleges and in individual degree plans within colleges, and it is not possible to summarize this section of the program.

1. Academic Foundations

In the thirty-four institutions surveyed in this study, the average requirement in general education was fifty-three hours, comprised of twelve hours of English, five hours of government, six hours of history, nine hours of science, five hours of mathematics, four hours of fine arts, four hours of physical education, and eight hours of work from

from other liberal arts fields. In state supported schools these other liberal arts fields were usually psychology, philosophy, foreign language, or speech. In church-related schools there was also a requirement in religion. It should be emphasized that the above description is derived from averages; there was considerable variation in the amount to be taken in each area. For example, the English requirement ranged from nine to eighteen hours; fine arts and mathematics from two to twelve; and religion from none to sixteen. No school had less than a total of forty-five hours of general education. The maximum was seventy-six hours.

2. Teaching fields

There were about twenty different secondary school teaching fields offered in the reporting schools. Only one subject field, English, was offered by all of the institutions. Ninety-four per cent offered teaching fields in mathematics, biology and chemistry.

It was difficult to summarize the information on the number of semester hours required in the teaching fields. In the first place, the Standards provided for two basic patterns, one calling for a first field of twenty-four hours and a second field of eighteen hours; and another calling for thirty-six hours in an integrated field which was supposed to cut across two or more subject fields. It was not possible to determine from the questionnaires which plan was being used for each of the subject areas. In the second place, some subject areas are also included in the general education requirement, and some colleges reported as the teaching field requirement the number of semester hours in excess of general requirements, while others reported the total number of hours. In the third place, it is not always clear whether the reported requirement is for a first field or second field.

Within these limitations, however, some generalizations are possible. Most separate subjects require from twenty-four to twenty-eight hours. This pattern was particularly utilized in English, mathematics, biology, chemistry, physics, foreign languages, journalism, library science, and speech. The fields requiring the greatest number of hours were agriculture (average fifty-five hours), music (fifty hours), home economics (forty-one hours), and commerce (thirty-seven hours).

The content area for elementary teachers is predicated on the fact that the majority of elementary schools are organized on a self-contained classroom basis in which one teacher teaches all of the subjects. The Standards provided for thirty-six hours of broad content for elementary teachers rather than specialized teaching fields. The majority of the reporting schools did not require the elementary education student to have a major in a subject field.

Interpretation of the data on content area requirements was difficult because of the lack of standard nomenclature, and because many of the reporting schools failed to indicate whether the content area subjects were taught in the Education department.

Art was listed by all institutions. Ninety-four per cent required music and children's literature. Geography and arithmetic were required by 84 per cent of the schools. Social studies was required by 77 per cent. Other subjects were science, speech-drama, health and physical education, mathematics-arithmetic, and language arts. The sum of the average number of hours required in the content area was forty-nine, but the wide range of requirements among the colleges makes it doubtful that any single school requies as much as forty-nine hours in this area.

3. Professional education courses

The typical programs for both elementary and secondary teachers included twenty-four semester hours of education courses, or about 20 per cent of the total requirements for graduation. The titles of the education courses varied from school to school. Nearly all institutions required in both elementary and secondary programs two beginning courses, one in introduction to education and the other in educational psychology. Both programs also included six hours of student teaching. The majority of elementary programs required a course in child psychology, and most secondary programs required adolescent psychology. Many institutions included courses in the secondary and the elementary curriculum in the appropriate programs. The majority of institutions included in the secondary program either a course in high school methods, or a special subject method course. Some elementary programs had a general elementary methods course and some had special methods devoted to one subject area, such as the teaching of reading in the elementary school. There was general agreement among the schools on the two introductory courses and student teaching. There was some agreement on curriculum and developmental (child or adolescent) psychology courses. There was not too much agreement on the course offerings beyond these.

MAJOR DEVELOPMENTS 1955-61

The last section of the questionnaire asked the institutions to state the major developments of teacher education programs since 1955. Called for specifically were (1) screening procedures and (2) major strengths and weaknesses.

The institutions reported the following developments resulting from the Standards:

(1) the program concept of teacher education

(2) campus-wide participation in teacher education

(3) establishment of screening procedures

(4) full-time and better supervised student teaching

(5) more emphasis on academic foundations

(6) reorganization of education courses.

Screening procedures

The majority of the institutions either had developed, or were in the process of developing, definite screening and selection procedures. These included:

(1) formal application to a screening committee after one or two years of college work

(2) consideration of the students' scholarship (usually slightly above average requirements for the college); and personal and physical fitness

(3) recommendations from several faculty members.

Some institutions added an admission to student teaching requirement and satisfactory scores on standardized examinations of various sorts. While no single set of criteria was used, there was evidence of considerable interest in improving selection programs as one means of improving the quality of teachers.

Major strengths

There was considerable overlapping of the items of major strengths with those of major developments. All of the items previously mentioned were included, and these additional ones were listed:

(1) improved counseling procedures

(2) improved caliber of students as a result of increased standards

(3) increased improvement of college instruction

(4) increased cooperation with public schools

(5) increased library facilities for teacher education

Major weaknesses

The major weaknesses were as follows:

(1) lack of fully developed program of laboratory experiences prior to student teaching

(2) inadequate screening procedures, especially for transfer students

(3) inadequate follow-up program

(4) failure to recruit reasonable number of students in fields of greatest scarcity

(5) lack of research

STUDY 7. UNDERGRADUATE COURSES IN EDUCATION IN TEXAS COLLEGES 1961-62

Study Director: Sandy A. Wall

The definition of professional education of the National Council for the Accreditation of Teacher Education was used in this study. The study was limited to (1) required courses in professional education, (2) electives offered in the school or department of education, and (3) courses offered in other departments or schools whose enrollment was usually restricted to teacher education students. There were three major parts to the study: (1) general classification, (2) teachers of the courses, and (3) analysis of topical outlines. The first two parts involved 750 questionnaires (See Appendix D) from thirty-seven senior colleges and eighteen junior colleges. The second part was based on a sample of 128 questionnaires drawn from 727 (some did not include a topical outline). In the sample were courses from thirty-five senior colleges and six junior colleges.

CLASSIFICATION

Of the 750 courses on which reports were obtained, 594 were taught at a senior college. Forty-two were taught in junior colleges, and 115 courses were not classified. Most of the courses were either junior or senior level (269 junior; 243 senior), and nearly all of them were of three semester hours in value. Most instructors gave several tests and the final examination usually summarized the entire course. The analysis of textbooks of the courses showed there were 328 different titles used in 647 courses. Apparently no single text dominates in its field. The review of the copyright date showed that the large majority of textbooks were recent, having copyright dates of 1950 or later.

TEACHERS OF THE COURSES

Two hundred and seven instructors gave information about their experience and training. Most of them were full-time instructors. Forty-nine per cent rank above assistant professor, and over half have taught their courses for more than three years. Sixty-one per cent have had four or more years of public school teaching experience, and sixty per cent have more than thirty graduate hours in their major specialty.

COURSE ANALYSIS

The questionnaires were sorted by titles of the courses, and the sample was taken from the title classification as explained in the complete report of the study. The titles were regrouped according to the content of the topical outlines. It was found that all courses could be classified under the following divisions: (1) social foundations of education; (2) psychological foundations of education; (3) curriculum and methods; (4) specialization, comprised of special methods courses for secondary school teachers and special subject matter courses designed for elementary teachers; and (5) education courses for teachers of exceptional children.

1. Social Foundations

Ten different titles were found for courses in this area. The three most frequently used titles were (1) introduction to education, (2) history of education, and (3) history and philosophy of education. There were ninety-five courses representing 13 per cent of the 727 courses.

Although the topics included in these courses varied in phrasing, there was considerable similarity in the content of the courses themselves notwithstanding the differences in titles and treatment. The six general topics which were found most frequently were (1) purposes of education, (2) social forces influencing the schools, (3) curriculum patterns,

(4) administration of schools, (5) philosophy of education, (6) history of education, and (7) the institutional levels of American education and their special problems.

2. Psychological Foundations

Eight different titles were found for courses in this area. The three titles most frequently occurring were (1) educational psychology, (2) child psychology, and (3) adolescent psychology. There were 130 courses representing 18 per cent of the 727 courses.

Both titles and topics indicated that five major areas were being taught: (1) learning, (2) human growth and development, (3) tests and test construction, (4) individual differences, and (5) counseling.

However, the emphasis was on the general survey type of course which usually included some aspects of all five of these areas. Students apparently took one course in general educational psychology and another course in developmental psychology, with elementary teachers taking child psychology, and secondary teachers taking adolescent psychology.

3. Curriculum and Methods

This classification included both elementary and secondary curriculum courses, methods courses, student teaching, and other related courses, such as audio-visual education. There were 200 courses representing 28 per cent of the 727 courses. The topics of these courses showed considerable over-all uniformity of content, although various colleges organized the work differently. The distinction between curriculum and methods courses was not always clear-cut; one school would assign a topic to a curriculum course which the next school put in a methods course. Similarly, what one school taught in a methods course might in another school have been taught in the lecture session of the student teaching course. The curriculum material usually included (1) curriculum organization and grade placement, (2) curriculum areas, (3) curriculum aids, (4) forces and trends in curriculum, and (5) extra-curriculum. The methods material usually included (1) type of methods, (2) instructional planning, (3) classroom management, (4) grading and reporting progress, (5) individualizing instruction, and (6) such other teacher-related functions as clerical duties and guidance. The student teaching courses included observation and supervised teaching in the schools, with attention in the on-campus class meetings given to various practical aspects of method, curriculum, and professional problems.

4. Specialization

These courses were defined for the purpose of this paper as those courses which (1) either provide special content for elementary teachers, or (2) were special subject matter methods courses for secondary school teachers. In both cases, these were usually offered in the subject department, or, occasionally, in the school or department of education by a subject matter teacher mutually acceptable to the two departments. An exception to this pattern was the course in children's literature, which was usually offered as an education course taught by an instructor in elementary education. In the area of content for elementary teachers were 120 courses, representing 17 per cent of the 727 courses. The three most frequently occurring were (1) music, (2) health and physical education, and (3) arts and crafts. The major portion of each of these courses was devoted to a survey of the subject content and skills directly related to the subject area.

The special subject methods courses for secondary school teachers were in fourteen subject fields. There were 145 such courses, representing 20 per cent of the 727 courses. The three most frequently offered courses were in the subjects of (1) health and physical education, (2) business, and (3) industrial arts-home economics.

Since fourteen subject areas were represented, it was difficult to devise a classification scheme that would encompass all of the courses. Apparently some of the courses, although called "methods," were, if judged by their topical outlines, "subject" courses. Most of these courses, however, gave attention to the organization of the subject area for instruction. Some of the topics were (1) value and history of subject, (2) organization and planning programs in subject area, (3) special methods, (4) evaluation of learning, (5) special equipment and classrooms, and (6) clerical duties.

These two specialization areas, one for elementary and the other for secondary teachers, were generally taught outside the department or college of education. There was a combined total of 265 such courses, representing 36 per cent of the 727 courses.

5. Exceptional Children

The final class of professional education courses is comprised of those courses devoted to the training of teachers of exceptional children. There were 37 courses in this area representing 5 per cent of the 727 courses.

The courses were generally of two types: (1) a general survey of this field; and (2) courses limited to one specific type of children (for example, the mentally retarded). The topics included (1) types of exceptional children, (2) value of educating these children, and (3) special problems relating to their education.

STUDY 8. THE INSTRUCTIONAL STAFF OF TEACHER EDUCATION PROGRAMS

Study Director: Leslie P. Evans

Material for this study was obtained from questionnaires which were sent to those junior and senior colleges in Texas which had teacher education programs.

The group was comprised to teachers of (1) Education courses, (2) content area courses for elementary teachers, and (3) special subject methods courses for secondary teachers. About 57 per cent of the reporting group were teachers of Education. The remainder were either teachers of content area courses or special methods courses, but the number in each group was not ascertainable. Eight hundred questionnaires were sent; replies came from 569 teachers, representing a 70 per cent return.

Sixty per cent (339) were men. About 73 per cent of the total group were married, 21 per cent were single, 3 per cent divorced, and 3 per cent widowed. About four-fifths (84%) were between the ages of thirty and sixty; less than 5 per cent were sixty-five or older, and about 5½ per cent were under thirty. (see Table 8.1)

The majority (52%) were born in Texas; 24 per cent were born in the South. Less than 15 per cent came from the combined areas of North Central, Eastern, or Middle Atlantic states. Only 2 per cent were foreign-born. Not only were the teachers primarily Texas or Southern-born; their parents also had been born in these two areas. Although the birthplaces of their parents were more widespread geographically, 34.6 per cent of the fathers and 38.6 per cent of the mothers were born in Texas; 27.6 per cent of the fathers and 24.2 per cent of the mothers were born in the South. (see Table 8.2) The fathers' occupations were largely business

TABLE 8.1. PERSONAL CHARACTERISTICS

	Number	Per cent
Men	339	60.0
Women	230	40.0
Married	411	72.7
Single	119	21.1
Divorced	20	3.5
Widowed	15	2.7
Age		
Under 30	31	5.5
31-35	61	10.9
36-40	93	16.6
41-45	85	16.9
46-50	88	15.7
51-55	76	13.5
56-60	57	10.1
61-65	35	6.2
Over 65	26	4.6
Rank		
Professor	165	30.4
Assoc. Professor	133	24.5
Asst. Professor	141	26.0
Instructor	84	15.5
Lecturer or other	20	3.6
Median age	46.989	

TABLE 8.2. GEOGRAPHICAL DISTRIBUTION BY BIRTHPLACE

Birthplace	Texas		South		North Central		Eastern		Middle Atlantic		Mid West		West		Foreign	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Teacher	283	53.0	83	15.5	38	7.1	25	4.7	11	2.1	69	12.9	15	2.8	10	1.9
Father	193	34.6	154	27.6	44	7.9	29	5.2	18	3.2	79	14.2	9	1.6	32	5.7
Mother	215	38.8	135	24.2	39	7.0	24	5.2	13	2.3	93	16.7	7	1.2	26	4.6

(27%) but 26 per cent of the reporting group came from an agricultural background and 22 per cent from the professions. (see Table 8.3)

TABLE 8.3. DISTRIBUTION BY FATHERS' OCCUPATION

Occupation	Number	Per cent
Agriculture	137	25.9
Business	143	27.1
Government Service	41	8.0
Trades	75	12.0
Professions	113	21.5
Other	28	5.5

Over half (55%) of the group came from families which had included teachers; 45 per cent, however, reported no teaching experience in their family background. (see Table 8.4)

TABLE 8.4. NUMBER AND PERCENTAGE OF FACULTY WITH TEACHING EXPERIENCE IN IMMEDIATE FAMILY[a]

No. In Family by Years	Number	Per cent
0	243	44.8
1-2	198	36.6
3-4	68	12.6
5-6	21	3.9
7-8	8	1.5
9-10	1	.2
Above 10	298	55.2

[a] Immediate Family includes father, mother, and siblings

Nearly 90 per cent of these college teachers had taught in public schools; 57 per cent had more than five years of such experience, and 12 per cent had had more than twenty years of public school experience. Sixty-four per cent had secondary school experience, and 41 per cent had elementary school experience. The group had started its teaching rather early; 35 per cent had been teaching by or before their twenty-first birthday, and 78 per cent had started their teaching career by their twenty-fifth birthday. Only 8 per cent entered teaching after they were thirty years old. (see Table 8.5)

TABLE 8.5. DISTRIBUTION BY AGE ENTERING TEACHING PROFESSION

Age	Number	Per cent
21 or below	195	34.8
22-25	239	42.7
26-29	81	14.5
30-33	23	4.1
over 33	22	3.9

The group had college teaching experience as well as public school experience. Only 9 per cent reported less than one year of college teaching. About 28 per cent had been teaching in college from one to five years, and 20 per cent had from six to ten years of college experience. Only 5 per cent of the faculty members had over 30 years of college experience. As a group they were well satisfied with their chosen profession. Eighty-one per cent reported that the teaching profession was their first choice of life's work, and 97 per cent indicated that they would enter teaching again if they were choosing a profession.

As could be expected from the report on years of college teaching, only a few became college teachers prior to 1920 or after 1958. Nearly 90 per cent began teaching in college between the years 1921 and 1958. During this period there was a steady growth in numbers until 1951.

At the time this study was made (1961-62), 30 per cent of the group were professors, 24 per cent associate professors, 26 per cent assistant professors, 16 per cent instructors, and 4 per cent lecturers or others. There were 1,388 earned college degrees (bachelors, masters, and doctors) and 15 honorary degrees for the 548 faculty members, or an average of about 2.6 degrees. Two hundred and ninety, or 53 per cent, held the doctorate; 141 of these were the Doctor of Philosophy and 149 the Doctor of Education. The bachelor of arts degree was the dominant undergraduate degree, and the master of arts ranked highest in number of the masters degrees held by the group. State supported institutions had granted 67 per cent of the bachelor's degrees, and 72 per cent each of the master's and doctor's degrees. Private institutions had granted 33 per cent of the bachelor's degrees, and 28 per cent each of the master's and doctor's degrees.

The large majority of the group (82.7%) completed the requirements for a teaching certificate at the time they received their bachelor's degree. Most of them majored in a subject field, and taught their major or minor field in public schools. Of the 492 reporting their undergraduate majors, 22 per cent had majored in education, 16 per cent in the social sciences, 14 per cent in English, 9 per cent in health and physical education, 8 per cent in science, 9 per cent in mathematics, and 7 per cent in music. The other majors were each less than 5 per cent, as shown in Table 8.6.

TABLE 8.6. DISTRIBUTION OF FACULTY MEMBERS BY UNDERGRADUATE MAJOR

Field of Preparation		Major		Per cent
Agriculture		16		3.3
Art		18		3.7
Business Administration		20		4.1
English		67		13.6
Foreign Language		11		2.2
Health & P. E.		46		9.4
History & Soc. St.		77		15.7
Home Economics		10		2.0
Ind. Arts & Voc.		9		1.8
Mathematics		37		7.5
Music		35		7.1
Religion		1		.2
Science		39		7.9
Education				
Sec. Ed.	14		2.85	
El. Ed.	54		10.97	
Others	38		7.72	
Total		106		21.5
Grand Total		492		

The major college teaching assignment of 57 per cent of the group was education courses. The other 43 per cent were distributed among thirteen subject fields. Health and physical education accounted for 11 per cent; music had 6 per cent, art, English, social science (including history), and science each had 4 per cent of the total reporting group, as shown in Table 8.7.

TABLE 8.7. DISTRIBUTION OF FACULTY MEMBERS BY COLLEGE ASSIGNMENT

Field of Preparation	Major Teaching Assignment	Per cent
Agriculture	4	.8
Art	19	3.8
Business Administration	13	2.6
English	20	4.0
Foreign Language	3	.6
Health & P. E.	52	10.5
History & Soc. St.	19	3.8
Home Economics	12	2.4
Ind. Arts & Voc.	11	2.2
Mathematics	14	2.8
Music	29	5.8
Religion	2	.4
Science	19	3.8
Education		
Sec. Ed.	78	15.7
El. Ed.	86	17.3
Others	117	23.5
Total	281	56.5
Grand Total	498	

STUDY 9. TEXAS TEACHERS AND THEIR WORK 1961-62

Study Directors: Nancy Alliene Harder and Clotilda C. Winter

The problem of this study was to determine the present status of public school personnel employed in Texas Public schools 1961-62. A questionnaire (see Appendix F) was sent to the teachers of Texas public schools, asking them about (1) classification data with reference to teaching position, age, race, sex, and teaching permit; (2) preparation with reference to formal schooling; (3) experience; and (4) their present school work. This study revealed information not only about the teachers, but also about the way pupils spend their instructional time. The study was based on a 10 per cent random sample.[1] The total return of usable questionnaires was 91,998. The number in the sample was 9,120. The tabulation was in terms of the size and teaching level of schools. The size of schools were as follows: S1-enrollment of 299 or less; S-2-enrollment of 300-4,999; and S3-enrollment of 5,000 or over. A fourth category was composed of cooperative agreement personnel (called in this summary "cooperative group") employed through the county superintendent's office as itinerant personnel. The teaching levels used were elementary (grades 1-6), junior high (grades 7-9), and senior high (grades 10-12). The classification "others" consisted of administrative and special service personnel (called in this summary "administrative group"), such as superintendents, principals, supervisors, counselors, librarians, nurses, and visiting teachers.

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[1] The sampling technique is described in detail in the original study by Harder and Winter.

CLASSIFICATION DATA

The median age of the total sample was 41.4 years. The classroom teachers were about thirty-nine years old as a total group. The teachers in small schools were forty-two years of age, those in the medium-sized schools were thirty-nine, and those in the large schools, thirty-eight. The administrative group was forty-six years old, with those in the smaller schools being younger (44) than those in the medium (46) or large (47). Most of the teachers were female, most of the administrative group were male.

CERTIFICATES

In addition to the regular certificates, the Texas Education Agency issues three types of temporary permits: (1) emergency; (2) one-year; and (3) special assignment. The emergency permit is applied for through the local superintendent. Its purpose is to permit local school districts with teacher shortages to employ the best qualified person obtainable. Prerequisite is a bachelor's degree, or ninety hours of college work and two years teaching experience. The one-year permit enables local schools to employ individuals who are fully qualified to teach except for the statutory requirements of a study of Texas and U. S. Constitutions. It was designed primarily for out-of-state teachers. The special assignment permit is issued to otherwise fully qualified teachers who do not have a specialized certificate or indorsement for the work them have been employed to do. For example, a teacher who has been selected to become principal but who does not have an administrative certificate would need a special assignment permit.

Eighty-five per cent of the total group had regular certificates, and 1,344 (15%) indicated they were teaching under one of the three permits--493 (6%) under emergency permits; 651 (7%) under one year permits and 200 (2%) under special assignment permits.

PREPARATION PATTERNS

Texas schools employed Texas-prepared teachers. Most teachers had a stable elementary and high school attendance record, more than three-fourt[illegible] [illegible]ot attend more than two school districts. They graduated from h[illegible] more than one hundred miles from the schools in which they were [illegible] If they graduated from a large school they were likely to re[illegible] [illegible] own school system to teach. Although the small schools did not usually attract their own graduates as teachers, they did employ people who had attended high school in the same county. Over half of the teachers (54%) attended college on an uninterrupted basis, and a third of the group attended one institution only. Elementary teachers were more likely to have had their college preparations interrupted than were senior and junior high teachers. The large school systems were more likely to employ the teachers whose college work had been continuous. If the undergraduate's work had not been continuous it was likely in a majority of cases that he had been interrupted to teach. This factor was especially common for the elementary teachers both in the small and large schools. It was less likely for secondary school teachers. The majority (88.7%) of Texas teachers received their bachelor's degrees in Texas colleges and universities. The largest percentage of these were from state supported institutions. The largest percentage of Texas teachers held a Bachelor of Science degree. Bachelor of Arts ranked second, and Bachelor of Science in Elementary Education ranked third. Most of the teachers (88%) had received permanent certificates at this time. There seemed to be no difference according to the size of school or the level of teaching. About one-third of the teachers had attended a junior college, most of them for two years, for the purpose of completing a part of their degree program. The median year in which the teachers received their bachelor's degrees was 1949. Most of the teachers had college credit on work done since this time, most of them having taken courses in the summer.

The median number of semester hours in professional education courses, excluding student teaching, was twenty-four. The secondary group averaged about nineteen hours of education; the elementary teachers about twenty-five. Probably the elementary teachers had more such courses because of the teaching requirements of the self-contained classroom assignments.

The median number of semester hours in student teaching was slightly less than six. Nearly one half of the teachers had had six hours of student teaching. A slight majority of Texas teachers had had a course in reading instruction. Slightly less than half had had a course which emphasized instruction in arithmetic. In both cases the highest percentage was indicated by elementary teachers.

An undergraduate academic major was indicated by 8,748 of the sample. Social science ranked first (17.2%), language arts second (15.2%), and health and physical education third (9.1%). Most of the social science group had majored in history (52%), the large majority of the language arts group had majored in English (86%). A second academic major was indicated by 3,579 of the teachers. Social science was first, language arts second, and science third.

Over half (66%) of the respondents had done or were doing graduate work. A majority of elementary teachers indicated elementary education as their graduate major. A majority of junior and senior high school teachers indicated secondary education as their graduate major. The administrative and special assignment personnel had completed more hours above the bachelor's degree than had the classroom teachers. Most of this administrative group had majored as graduate students in either secondary education or educational administration. Slightly less than one half of the teachers indicated that they held a master's degree. A majority of these were Master of Education degrees. More administrative personnel held master's degrees than did classroom teachers. More Master of Arts degree people were employed by the large systems. More Master of Education degree people were employed by the small or average sized schools. A larger percentage of senior high teachers held the Master of Arts degree than did those on other assignments.

THE WORK OF THE TEACHERS

Length of school day

The median length of the school day for teachers in Texas was 7.8 hours. The median length of the school day for pupils was 7.2, slightly less than for teachers. Children in the small schools stayed in school slightly longer each day than in the average size or large schools.

Assigned Duties other than Classroom Teaching

Teachers are required to perform numerous duties during the regular school day in addition to their classroom teaching. The table below shows the average number of minutes per day spent by the total number of teachers included in the sample. Approximately one and one-half hours a day were spent in these activities. In addition to the various duties other than teaching that were carried on by teachers during the regular school day, there were others which were required to be done outside the regular time spent at school. The data from these findings indicated that teachers spent an average of 9.07 hours per week on school work outside the regular school day, or, for a five day week, about one and three-fourths hours a day. The subdivisions are shown in Table 9.1.

TABLE 9.1. ASSIGNED DUTIES OTHER THAN CLASSROOM TEACHING

Duties	Minutes per day
Lunch with pupils	18.8
Pupil conferences	14.7
Study ahll	13.3
Sponsor of organized student group	7.9
Advisory	7.7
Banking	2.2
Other (at school)	14.0
TOTAL (at school)	90.6
School work outside regular school day	108.8
GRAND TOTAL	199.4

Elementary school

This description of the work of the elementary school is based on the number of minutes per week which the teachers reported spending on the elementary school subjects. These were converted to percentages to make comparison possible. Most of the elementary teachers taught on a self-contained classroom basis, with one teacher assigned to teach all of the subjects of one grade. Some departmentalization was found; it tended to be less prevalent at the primary level, but increasingly prevalent at the intermediate level. The subject most frequently taught in the lower grades on a departmentalized basis was music, with physical education next.

There was a sharp increase in departmentalization at the fourth grade level, and at the sixth grade level. Approximately one-fourth of the curriculum was offered on this basis. At the elementary level in the self-contained classroom the teachers spent the largest amount of time on those subjects classified as the English-language arts (reading, spelling, handwriting, oral and written composition and usage). The most time was spent on reading, which occupied 50 per cent in the first grade to 9 per cent in the ninth grade. Spelling received 9 per cent of the time of the second grade, and nearly 5 per cent of the ninth grade's. Handwriting occupied 8 per cent of the first grade's time and nearly 4 per cent of the eighth grade's. Oral and written composition rose from 6 per cent of the first grade's time to 13 per cent of grade seven's. Social science, including geography, history, civics, and social studies, occupied 5 per cent of the time of grades one and two, and 20 per cent of grade eight's. Science and health, combined as a unit, comprised 12 per cent of the time in the first grade and 17 per cent in grade eight. The majority of time in science-health was spent on science.

Arithmetic occupied about the same amount of time in all of the grades: 12 per cent of the time was spent teaching this subject in the first grade and 15 per cent in the seventh. Fine arts, including music and art, received 11 per cent of the time in the first grade with a gradual decrease tc 4 per cent in the ninth. More time was spent in teaching art than in music in all of the grades.

Physical education showed little differentiation throughout the grades. About 9 per cent was fairly constant throughout the first eight grades, with an increase to 12 per cent in grade nine.

Very little time was given to foreign language. It rated a high of .6 per cent in grades three and eight. Also low in time allotment was industrial arts, or homemaking, with less than 1 per cent until grade nine, where it received 11 per cent of the weekly time.

Figure 9.1 shows the relative amount of time spent on the elementary school subjects. This figure is based on data reported in Table 9.2.

Secondary school

The description of the work of the secondary school is based on the number of subjects which the teachers reported as a part of their regular teaching assignments. These were converted to percentages to make comparisons possible. A summary is given in Table 9.3.

The secondary curriculum was grouped into twelve major areas: (1) business; (2) English language arts; (3) fine arts; (4) foreign languages; (5) health; (6) industrial arts; (7) mathematics; (8) physical education; (9) science; (10) social studies; (11) vocational education; and (12) miscellaneous. Under subdividions of each of these were listed the separate subjects that constitute the approved courses for Texas schools. Business, offered in 12 subjects, represented 5.7 per cent of the total secondary school curriculum. First year typing had the largest percentage of all business subjects. First and second year typing together comprised over one-half of the business curriculum. While one or more subjects in the broad area of business was taught at each grade level from grades seven through twelve, the largest percent was found in grade twelve.

The English language arts, offered in sixteen different subjects, represented 20.0 per cent of the total curriculum. English literature and grammar represented over three-fourths of the language arts curriculum, and reading about 15 per cent. The areas of speech-drama and journalism comprised the remainder (about 7%).

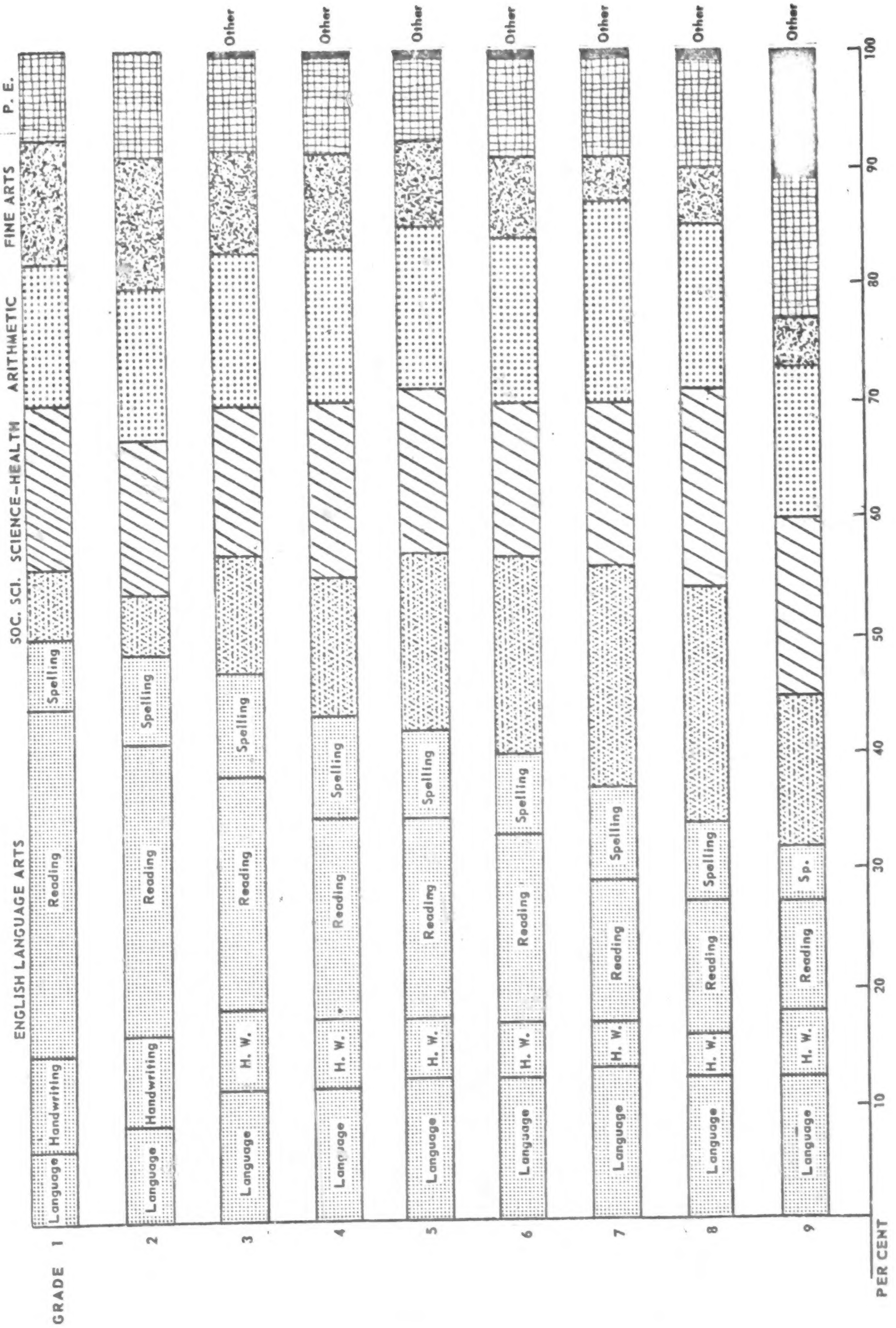

FIGURE 9.1 PER CENT OF MINUTES PER WEEK BY GRADE LEVEL AND SUBJECT

TABLE 9.2. PER CENT OF MINUTES PER WEEK BY GRADE LEVEL AND SUBJECT

	Grades								
FIELDS	1	2	3	4	5	6	7	8	9
ENGLISH-LANGUAGE ARTS									
Language	6.1	7.8	10.9	11.3	11.5	11.9	13.2	12.1	12.4
Handwriting	7.9	7.8	6.6	5.7	5.1	4.5	4.0	3.6	5.6
Reading	30.2	24.8	20.4	17.2	16.7	16.0	11.9	11.1	8.9
Spelling	6.1	9.0	8.7	8.4	8.6	8.0	8.2	6.8	4.6
TOTAL	50.3	49.4	46.6	42.6	41.9	40.4	37.3	33.6	31.5
SOCIAL SCIENCE									
Geography	.9	1.5	6.0	8.0	7.0	7.6	6.3	7.0	1.1
History	.5	.3	.4	.7	2.3	4.2	6.3	7.8	5.7
Social Studies	4.1	3.4	3.4	3.7	5.6	4.8	6.4	5.4	6.3
TOTAL	5.5	5.2	9.8	12.4	14.9	16.6	19.0	20.2	13.1
SCIENCE - HEALTH									
Science	7.2	7.8	8.2	8.9	8.1	8.1	10.0	10.2	10.2
Health	5.0	4.8	4.5	5.6	5.6	5.2	6.2	6.7	5.2
TOTAL	12.2	12.6	12.7	14.5	13.7	13.3	16.2	16.9	15.4
ARITHMETIC	12.4	12.7	13.0	13.4	13.6	14.1	14.6	14.1	13.0
FINE ARTS									
Music	4.2	4.3	3.5	3.1	3.1	2.8	1.7	2.2	.7
Art	6.4	6.2	5.1	4.6	4.3	3.8	2.7	2.6	3.3
TOTAL	10.6	10.5	8.6	7.7	7.4	6.6	4.4	4.8	4.0
PHYSICAL EDUCATION	8.8	9.3	8.6	8.7	8.0	8.5	8.0	9.5	11.9
OTHER									
Foreign Language	.1	.1	.6	.4	.4	.4	.3	.6	0
Industrial Arts	.1	.2	.1	.3	.1	.1	.2	.3	11.1
TOTAL	.2	.3	.7	.7	.5	.5	.5	.9	11.1
GRAND TOTAL	100	100	100	100	100	100	100	100	100

TABLE 9.3. SECONDARY COURSES BY SUBJECT AND GRADE LEVEL

	Grades 7		8		9		10		11		12		Total	
SUBJECT AREA	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Business	7	.3	13	.5	83	3.2	121	5.2	277	12.8	431	20.8	932	6.6
English-Language Arts	697	28.3	646	25.9	420	16.1	389	16.7	368	17.0	329	15.9	2849	20.2
Fine Arts	183	7.4	149	6.0	129	5.0	90	3.9	81	3.7	88	4.2	720	5.1
Foreign Language	31	1.3	36	1.4	94	3.6	134	5.7	90	4.2	50	2.4	435	3.1
Health	96	3.9	67	2.7	27	1.0	18	.8	11	.5	13	.6	232	1.6
Industrial Arts	28	1.1	48	1.9	82	3.2	55	2.4	50	2.3	53	2.6	316	2.2
Mathematics	363	14.8	393	15.8	502	19.2	385	16.5	233	10.7	210	10.1	2086	14.8
Physical Education	297	12.1	284	11.4	299	11.5	200	8.5	158	7.3	159	7.7	1397	9.9
Science	289	11.7	301	12.1	290	11.1	239	10.3	183	8.4	167	8.1	1469	10.4
Social Studies	426	17.3	474	19.0	170	6.5	252	10.8	320	14.7	363	17.5	2005	14.2
Vocational Education	8	.3	18	.7	396	15.2	384	16.5	350	16.1	149	7.2	1305	9.2
Miscellaneous	36	1.5	64	2.6	113	4.4	63	2.7	49	2.3	59	2.9	384	2.7
TOTAL	2461	17.4	2493	17.6	2605	18.4	2330	16.5	2170	15.4	2071	14.7	14130	100.0